The MEU for the Long War: Assessing the Roles and Missions of Today's MEU for Tomorrow

Thomas A. Bowditch Laura E. L. McGuckin

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Kim Deal

K Dl

Director, Naval Operations and Support Team

Operations Evaluation Group

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Summary

The Operations Division Director, Plans, Policies, and Operations, HQMC, asked CNA to analyze the relevance of the Marine Expeditionary Unit (MEU) Special Operations Capable (SOC) in light of recent operations and emerging requirements. We have been in a different security environment since the events of 11 September 2001 and the opening years of what has come to be called the "long war" against global Islamic extremism. The Marine Corps wants to validate the existing organizational structure, manning, and methodology for deployment of its forward afloat expeditionary units against the particular requirements of this emerging challenge to the United States. Simply stated, Are the capabilities of the MEU (SOC) still relevant to the evolving needs of the geographic Combatant Commander?

The main findings of this study are the following:

- The future security environment for the United States will be markedly different in the new century. The changed threat calls for changes in American military forces, in particular the expeditionary forces deployed forward for security cooperation and rapid-response to crisis.
- The MEU as it exists is well-suited to the needs of the forwardbased Combatant Commanders in the changed international security environment of the future.
- There are some areas that could be improved to better the MEU for the coming engagement with an irregular and asymmetric enemy. Among these are;
 - The ability to disperse easily and provide independent, distributed offensive striking power,
 - Protracted engagement over time in counterinsurgency operations,

— Equipment and capabilities optimized for low-intensity, irregular warfare.

As we developed the requirement for forward afloat expeditionary forces in the Combatant Commander's (COCOM) Area Of Responsibility (AOR), we found it necessary to characterize the future international security environment. The premise of the study has been that the international security environment is changing, and the future threats to stability and U.S. interests abroad will be different in this century. This new environment logically calls for different forces. As the focus within the naval service turns to the long-term struggle against our committed ideological opponents in the global Islamic insurgency, the need for distributed, networked operations with force packages able to provide a scalable range of strikes is more and more evident [1].

A detailed analysis of current MEU organization, equipment, and capabilities mix determined that for the most part the MEU (SOC) is well suited to the needs that the Combatant Commander will have in the low-intensity, counterinsurgency environment of the future. This is particularly true when the MEU is augmented by an element of the newly created Marine Corps Forces Special Operations Command (MARSOC). Our analysis nevertheless revealed some areas that the Marine Corps might examine as possible places for improvement to better position the MEU for its role in the long war against the widely dispersed global insurgency of militant Islam.

Primary among those potential weaknesses is the ability of the MEU to operate offensively in a dispersed or distributed condition, remaining netted and sustainable in distant environments. This conclusion was examined closely in light of the fact that the amphibious ready group (ARG) on which the MEU is embarked for deployment

^{1.} As note on style, in this report we use the term "MEU" to refer to the MEU as an organization in generic terms. When we seek to distinguish the MEU in its special operations capable role, or call attention to that capability, we will so state, or use the designation MEU (SOC).

^{2.} Terms such as "global Islamic insurgency" and the "long war" are explained in the next section, which is on defining the requirement.

frequently operates in a split condition, with the three ships in separate ports or supporting different phases of an exercise. Research has revealed that, for the most part, such "split ARG" operations have not been truly distributed operations, due to the limited capacity of the individual ships to support independent offensive operations.

We examined this conclusion to determine whether the impediment to effective distributed offensive operations lay with the composition of the MEU itself or with the structure of the amphibious squadron in which the MEU is embarked. We determined that the limiting factor in achieving more distributed, simultaneous striking capability is the number of ships in the ARG, not the organizational construct of the MEU. There is sufficient combat power and task organization flexibility within the current MEU to achieve significant distribution of offensive striking power. There are also sufficient platforms for ship-to-shore movement of independent raid or force reconnaissance teams, either by surface or helicopter, or a combination of both. There are some potential changes to the MEU itself that the Marine Corps may want to consider in order to facilitate dispersed offensive operations; however, a principal recommendation of this study is to examine the force generation model (the ship composition and deployment pattern) of the ARG in order to see whether the number of ships in the ready group as well as the length of the standard deployment, could be increased.

We determined that a second possible weakness of the MEU is its ability to sustain irregular warfare over extended periods of time against the global Islamic insurgency. Irregular warfare encompasses the range of challenges coming mainly from non-state actors employing unconventional methods to counter the traditional advantages of stronger opponents [2]. Part of the MEU's mismatch in capabilities for irregular warfare is related to the regional persistence of the ARG/MEU — the deployment pattern does not give the force much time in a theater on a given deployment. Extending the deployed time can help improve this capability, but there are other measures the Marine Corps can take to de-emphasize conventional combat capability in favor of low-intensity and counterinsurgency capability.

A principal conclusion from our research is that the forward-deployed expeditionary forces of the United States, the MEU among them, need to be optimized for the global struggle against militant Islamic terrorists. One way for the MEU to do this, is to stay longer in the area of operations. Other measures include taking some degree of risk in conventional military capability in order to accentuate the MEU's preparedness for low-intensity, counterinsurgency operations. This suggests a future emphasis on a MEU with less sophisticated warfighting capability but with more intelligence gathering and interpretation capability, as well as a better ability to operate in distributed packages against a dispersed and illusive enemy. This points to more helicopter lift, clandestine entry from the sea, small raid, and other direct action capabilities.

In this regard we recommend "lightening" the MEU by removing certain higher-end conventional combat capabilities in order to better suit the MEU for the kind of combat we anticipate in the future. In particular we discuss the M1A1 main battle tank, the M-198 155mm towed artillery piece, and the AV-8B light attack jet, as possible candidates for removal to produce a less cumbersome, logistics-intensive expeditionary task force.

Introduction

The Operations Division Director, Plans, Policies, and Operations (PP&O), HQMC, asked CNA to analyze the relevance of the Marine Expeditionary Unit (MEU) Special Operations Capable (SOC) to the evolving international security situation. The world has changed dramatically since the events of 11 September 2001 and the opening years of what has come to be called the "long war" against global Islamic extremism. The Marine Corps wants to confirm that the existing structure, manning, and deployment patterns of its forward afloat expeditionary units are right for the new challenges confronting the United States. Simply stated, Are the capabilities of the MEU (SOC) still relevant to the needs of America's forward-based geographic commanders?

This report provides the results of our research, summarizes our findings, and completes the study.

Background and assumptions

For decades, the MEUs have been routinely deployed to forward locations in order to help maintain U.S. presence and be available quickly to respond to developing crises. Today the MEU is typically deployed for six months on naval shipping, forming a seabased, naval expeditionary force. The MEUs were designed to execute limited-duration amphibious operations, act as an advance force, and provide a wide spectrum of quick-responses. Since the mid-1980s the MEU has been provided with a special operations capability by the inclusion of a Maritime Special Purpose Force (MSPF) and by training to a set of specified mission standards. To support its operations, a MEU typically carries 15 days' worth of supplies. Currently, the Marine Corps maintains seven standing MEU command elements. The 22nd, 24th, and 26th MEUs are on the East Coast; the 11th, 13th, and 15th MEUs are on the West Coast; and the 31st MEU is in Japan. At the

appropriate time in the training and work-up schedule for deployment the required forces are attached to the MEU command element, resulting in a task-organized MEU.

Since the events of 11 September 2001, the world has indeed changed greatly, and so has our security situation. The end of the Cold War and the events of 9/11 should logically have occasioned a review of our force structures in several areas, including the MEU. This did not happen for the MEU because we transitioned so quickly into Operation Enduring Freedom (OEF), which led directly into Operation Iraqi Freedom (OIF). The 15th MEU (SOC) went ashore in Afghanistan in November 2001. Since then the MEUs have participated in the fighting in both Afghanistan and Iraq, with routine employment of the MEUs ashore in Iraq since the U.S. invasion in the spring of 2003.

It is now clear that even once we complete the current security mission in Iraq, and once the resurgent Taleban are defeated in Afghanistan, the global contest with extremism will continue for the foreseeable future. It is also clear that the MEU has an important role to play in that contest. Now is a good time to review the MEU as the right weapon for the future.

The following assumptions guided our research and analysis of the continued relevance of the MEU:

- While we understand that current deployment patterns situate the MEU and the amphibious ready group within the larger formation of the expeditionary strike group (ESG), we nonetheless have concentrated on the MEU as a discrete element. It may turn out that recommendations for change in the MEU will affect the ESG; however we will be consider that issue separately, not as part of this study.
- The Marine MEU has been used extensively in operations in Iraq and, to a lesser extent, in Afghanistan since the beginning of OEF and OIF. It is an important assumption that this combat experience will not form the pattern of future MEU employment. That is not to say that such operational employment is not important or that no valuable lessons have been learned for

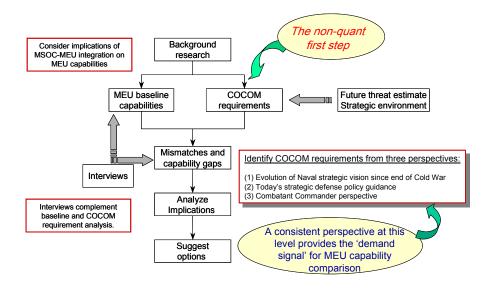
MEU organization and training. Rather it means that we do not intend to develop future MEU employment patterns based on recent fighting in the Central Command AOR. Our focus is on the longer-term future of the MEU — specifically, its continued relevance to the evolving security environment and to the struggle with global Islamic militancy.

- The Marine Corps is in the opening stages of fielding a new Marine Corps Special Operations Command and, as part of that enterprise, will build Marine Special Operations companies for future deployment with the MEU. These companies will replace the MSPF and give the MEU of the future its SOC capability. The command relationships and other issues attendant to this development are not the subject of the current analysis.
- Lastly, while the study sponsor has said he does not want a "history lesson" from this research, we must take some notice of recent MEU deployment patterns, to provide some perspective on traditional MEU employment.

Methodology

We began our analysis with background research into the requirements and the baseline capabilities of the MEU (SOC). This gave us an understanding of the particular set of capabilities that the COCOM expects to get from his forward afloat expeditionary forces. We then assessed the "fit" of the Marine Expeditionary Unit by comparing MEU capabilities to this requirement set. Our assessment included data research into deployment after action reports and lessons learned files, as well as a wide range of interviews with current and former MEU commanders and their staffs. The analysis uncovered mismatches or gaps in capability between what the MEU (SOC) brings to the theater and what the COCOM needs in order to carry out his responsibilities. Following the "gap analysis" another period of research and field interviews lead to the development of suggested options for improving the relevance of the Marine Corps' routinely deployed expeditionary forces. Figure 1 below depicts the overall study design.

Figure 1. Study design



Overview

The remainder of the report is divided into four sections: Combatant Commanders' Requirement establishes the "demand signal," or the set of force capability requirements that the forward geographic commander has for readily employable expeditionary forces. Baselining the MEU Capabilities lays out the current organizational construct and methodology for deployment of the MEU with an emphasis on the capabilities that the MEU now brings to the fight. Gap Analysis presents the comparison of the two data sets, the requirement and the capability, and assesses mismatches or gaps between the two. Potential Approaches for Addressing the Gaps provides suggested alternatives for improving either the organizational construct of the MEU or the force generation model that establishes the methodology for deploying the amphibious ready group that embarks the MEU. Following these sections, we summarize our findings and recommendations in Conclusions.

The requirement

By first understanding the particular set of capabilities the geographic Combatant Commander (COCOM) expects to get from his forward afloat expeditionary forces, we can then assess the "fit" of the MEU (SOC) into this requirement set. The specific purpose of our analysis is to uncover mismatches or gaps in capability between what the MEU (SOC) brings to the theater and what the COCOM needs to carry out his responsibilities. The "gap analysis" will lead to the development of options for improving the relevance of the Marine Corps' routinely deployed expeditionary forces.

The Combatant Commander's Requirement establishes the "demand signal" — that set of force capability requirements that the forward geographic commander has for readily employable expeditionary forces. It is a basic assumption of this study that the international security situation has changed significantly since the end of the Cold War, and, in particular, since the events of 11 September 2001. It is through this changed security lens that we seek to view the MEU.

Note that the development of the requirement for this study is explained in some detail in a previously published CNA annotated briefing (CAB), which was prepared as an early deliverable for the study [3]. We will present the highlights of that treatment here to provide continuity and to enable this document to stand alone.

The shape of the future security environment

When the Cold War ended, so did the long-held sureties of a bipolar world with its threat of great power conflict [4]. It has taken fully a decade to crystalize the threat picture of the future, but today we understand that transnational Islamic extremists and their terrorist agenda will be the greatest threat to our national security, and indeed to the integrity of the international global interdependency that is essential to continued world development [5]. One obvious counter

to a globally dispersed, loosely netted insurgency is an equally wide dispersal of forward presence by U.S. and partner nation militaries. The *National Defense Strategy* makes it clear that our continued global influence in the face of this threat depends on our effective projection and sustainment of distributed force posture in distant environments [6].

What is the "long war"?

The "long war" refers to the struggle against global Islamic militancy, also sometimes understood as the Islamic insurgency. "Insurgency" is a term that needs explaining since we normally think of insurgencies in terms of indigenous counter-government guerilla movements that are limited to a single country. Our principal enemy today is a global movement of fundamentalist Islamic militants that because of ideological commonalities, has been able to superimpose itself on existing local movements around the world [7]. The al Qaeda group has been at the center of this global, virulent, and dangerous anti-U.S. movement since the mid-1990s [8]. Al Qaeda has become an inspiration — ideological, political, and fiscal — for local terrorist and insurgent groups whose activities and ambitions would likely have remained regional without the inspiration of Osama bin Laden and his lieutenants [9].

The Islamic insurgency theoretically seeks to overthrow or radicalize a series of governments worldwide, from Indonesia and the Philippines to Saudi Arabia and Egypt. It comprises local insurgencies who do not particularly concern themselves with movements outside their countries, and it also contains robust terrorist organizations with designs on countries beyond the borders of their own home, such as the Hezbollah. The Islamic insurgent, whether he thinks of himself as rebelling against the repressive government in Bangkok, or fighting for Islamic autonomy from Mubarak, is ideologically ready to provide support to the globally linked al Qaeda operative, and to take what Osama has to offer in return [10]. Striking America is only a problem of logistics, since most of the local insurgencies understand the United States to be supportive of the repressive regime they focus on regionally. Fighting all these movements, and, in particular, fighting the centralized global inspiration, is the long war [11].

The Commandant and Distributed Operations

In its recent work on "Distributed Operations," the Marine Corps makes clear that it sees the struggle against the irregular challenges of the global Islamic insurgency as the central war-fighting theme of the future for the United States [12]. This concept recognizes that tomorrow's enemy will be adaptive, decentralized, and elusive. This enemy has been characterized as one who his harder to find but easier to kill, and consequently, with whom our engagement will be, above all, intelligence intensive [13].

Distributed operations capitalize on the Marine Corps' decades-old commitment to maneuver warfare, and the extraordinary small unit leadership of its junior officers and non-commissioned officers. It recognizes the need to deliberately use separated but coordinated and interdependent tactical actions by smaller forces to defeat an asymmetric but fanatical enemy. Such units spread across a large area of operations will create a spatial advantage against similarly dispersed enemy formations, by employing supporting arms, joint fires, and superior close engagement technology. Such units will be linked through a common command and control network that ensures a uniform view of the entire battle space and the synergy of a common operational objective. The actions of these smaller groups are separate, but the purpose is common.³

The nature of future combat

Dispersed and operating from the so-called "global commons," U.S. forces, in partnership with like-minded countries, must be capable of a wide range of counter-terrorist operations. These operations will be in the manner of counterinsurgency actions, characterized by low-intensity but high-lethality combat against a dispersed and irregular enemy who tends to merge with the indigenous population. The Marine Corps Intelligence Activity has stated:

^{3.} This concept remains under development and review by the Marine Corps. Regardless of whether Marine doctrine ever formally accepts Distributed Operations, the future will require separated, independent operations of some sort to counter a widely dispersed and illusive threat.

U.S. military operations in the 21st century will likely focus on neutralizing asymmetric threats. Non-state actors such as terrorists and insurgents will likely be the primary threat to American national security and its interests for years to come. Asymmetric warfare is based on surprise — doing the unthinkable or unconventional to undermine the enemy's strengths and exploit his weaknesses. States and non-state actors will compensate innovatively for military technological weaknesses. [14]

This will not be a short contest. If we are to believe the construct laid out in the most recent *Quadrennial Defense Review*, we are likely to be engaged in the long war against the global Islamic insurgency for at least the coming decade [15]. There is also every indication that this contest will not be fought as a conventional engagement, but will rather be a series of widely distributed irregular warfare (IW) operations [16]. It is also recognized that the Islamic insurgency will not be defeated by the U.S. military alone, or even by a coalition of Western militaries. It can be defeated only through complementary endeavors by all the agencies of U.S. and other Western and like-minded governments — economic, diplomatic, political, societal, and cultural [17].

The long war and security cooperation

By the same token, there is a non-kinetic side to the military arsenal. As important as irregular warfare will be against global terrorist organizations, the security cooperation capabilities of forward-deployed U.S. naval forces will be just as important. Naval forces have the organic mobility and sustainment to provide the long-dwell presence that makes security cooperation activities truly meaningful. These actions are essential to assuring our allies and partners that we are dedicated to eradicating global extremism and preserving a secure international environment conducive to the tenets of globalization. It is also imperative that we develop and enhance the capabilities of our allies to operate with us in coalitions and partnerships aimed at increased maritime security and the protection of our common interests [18].

More and more today the Combatant Commander sees security cooperation activities as an essential part of his operational posture in his AOR, rather than as a passing opportunity for U.S. forces to engage

in bilateral training during a transit or while deployed forward in anticipation of a crisis. We seek to build long-term relationships with the militaries of important nations, relationships that will promote U.S. security interests and lead to assured access in contingencies.

Combatant Commander's requirements

Requirements are difficult to quantify, there is an understandable temptation simply to work backwards from what's available. Clearly, the Marine MEU is a case in point — it is based more on capabilities than on requirements. Still, we cannot do a course check without having a solid understanding of the destination. If the central question of this study is, "Is the MEU still right?" we need to ask, "Right for what?" It is this strategic future we seek to define — and to know whether the MEU continues to be applicable, we need to define that future in terms of the COCOM's force requirements.

Our approach in this study was to begin at the strategic top, in an attempt to define the future global security environment and the role of Marine expeditionary forces in that environment. In this section, we begin by defining the requirement at three levels:

- First, we examine how forward-deployed naval expeditionary forces have fit into the evolving U.S. Navy strategy since the end of the Cold War. What kinds of forces do the Navy and Marine Corps intend to deploy, and how do they intend to fight in the future?
- Second, we analyze the current strategic defense policy guidance from the Office of the Secretary of Defense and the National Command Authorities. That guidance defines the national priorities that naval forces are expected to further.
- Finally, we consider the operational level the domain of the COCOM. How does the COCOM see his requirements? This last area, although difficult to quantify, is essential to rounding out the picture.

The third level of requirement definition noted above, the Combatant Commander's perspective, is detailed in a classified appendix to the unclassified report mentioned at the outset of this section [19]. We will include the unclassified conclusions of that research in the final set of COCOM requirements, presented at the end of this section.

The evolution of Navy strategy

We begin our examination of the requirement by looking at how forward-deployed naval expeditionary forces have fit into the evolving U.S. Navy strategy since the end of the Cold War. The operational concepts for naval warfare have changed significantly since the 1991 Gulf War signaled the end of the Cold War. Our interest now is in what kinds of forces the Navy and Marine Corps intend to deploy, and how they intend to fight in light of the evolution of those concepts.

Naval strategy for the Cold War

We do not need to dwell on the naval strategy for the Cold War; we only need to point out that high-end global conflict strategy ultimately determined what systems the U.S. Navy and Marine Corps fielded, how naval forces were forward-deployed, where and with whom exercises were held, and how the respective COCOMs intended to fight the fleets.

In assessing the current and future requirement for the MEU, the important thing is to note how significantly the U.S. focus has changed since the end of the Cold War.

The paradigm shifts

When the Cold War ended, the Navy/Marine team found itself forward-deployed in considerable strength against the anticipated conflict with the Soviets. It was out of this Cold War configuration that U.S. forces deployed to the first Gulf War in 1990. Although that engagement was not a war against the anticipated Soviet threat, it was still a conflict that required a large concentration of naval forces, to include Marine amphibious forces.

But as the certainties of the Cold War receded and the Gulf War ended, it became clear that the naval service needed to move away from a force structure and deployment pattern based on the assumption that we would enter into a global conflict with the sophisticated naval forces of the Soviet Union. What seemed certain was the need to bring the focus down to the regional level, and to concentrate on the stability issues that seemed likely to arise in the absence of the bipolar alignments of the Cold War. Understanding exactly how to do that was to take some time.

The Way Ahead and From the Sea

The Way Ahead was published in April 1991 by the Secretary of the Navy Lawrence Garrett; the CNO, ADM Frank Kelso; and the CMC, General Al Gray [20]. These leaders correctly understood the magnitude of the changes taking place in the global security environment as a result of the end of the Cold War, and the magnitude of the change required in reshaping the U.S. naval component to accommodate that change. Smaller, more modular and flexible forces, tailored for operations short of war as well as for conflict resolution, would be required forward, with significant reinforcement prepared to surge forward from bases in the rear.

Under a new Secretary of the Navy, Sean O'Keefe, a new Commandant, General Carl Mundy, and CNO Kelso, the concepts for a transformed naval service expressed in *The Way Ahead* were tightened, further developed, and made official in the strategy statement, *From the Sea*, published in September 1992 [21]. The central tenet of the refined concept was a concentration on expeditionary forces, shaped for joint operations, operating forward and tailored to the particular situation in each of the critical regions of U.S. national interest.

Continuing the major shift from open-ocean warfare and large, flanking amphibious operations, the Navy/Marine team would now be forward in scalable packages which could respond to crises on behalf of the geographic commanders, and "enable" the initial arriving joint forces. This required a set of operational capabilities that, even then, were beginning to look more like today's needs:

- Swift response on short notice by forces already forward,
- Sustained support for long-term operations when necessary,

- The ability to operate from international waters to the shore,
- More flexible command and control (C2) and resources for persistent surveillance.

Capstone strategy at the end of the decade

For the Navy, the decade ended with CNO Admiral Jay Johnson publishing the capstone *Navy Strategic Planning Guidance* in April 2000 [22]. This document summed up the work of the previous 10 years since the publication of *The Way Ahead*, solidifying the U.S. naval service's shift to an expeditionary focus on the littorals and confronting the growing threat from regional, non-state actors and international terrorism.

The decade had seen the evolution of naval force packages away from high-end counter-Soviet battle groups. Strategic thinking had migrated toward modular, scalable packages that could provide the geographic COCOM with several options, from operations other than war, to shaping and engagement activities with partner nations — all while maintaining the ability to shift rapidly to forces credibly shaped for combat.

For the landing forces of the Marine Corps, the 1990s ended with *Operational Maneuver From the Sea* (OMFTS) the dominant strategic concept for the projection of power across the shore to objectives inland [23]. In OMFTS, the proven concepts of maneuver warfare and power projection from the sea were combined.

The world after 9/11: transformation continues

The changes underway in the naval service over the previous decade proved timely as the nation geared itself to respond to the completely changed security environment brought about by the events of 11 September 2001. Published by Secretary of the Navy Gordon England, CNO Admiral Vern Clark, and CMC General James Jones, *Naval Power 21* and its influential sequel, *Sea Power 21*, confirmed the direction taken by the Navy and Marine Corps since the end of the Cold War [24, 25]. If anything, more emphasis was now placed on dispersed and flexible forces engaged as far forward as possible.

The specific Marine Corps contribution to *Naval Power 21* was the capstone *Marine Corps Strategy 21*, which confirmed that maneuver warfare wedded to expeditionary power projection would be the central tenet of amphibious warfare in the future [26]. In the immediate aftermath of 9/11, what seemed most useful to the Marine Corps were scalable, interoperable, combined-arms Marine task forces. Such flexible force packages could engage in peacetime to shape the international environment and yet respond quickly across the combat spectrum from crisis control to outright combat.

By this time, the concept of the expeditionary strike group (ESG) had been developed. The premise, taken directly from the strategic documents cited above, was that the COCOMs would now have an increasing demand for forward-deployed naval forces capable of providing distributed, simultaneous offensive capability. The ESG consisted of the MEU (SOC) normally deployed aboard an amphibious ready group (ARG) augmented with strike-capable surface warships and submarines. Configured in this manner, the ESG was capable of prosecuting Sea Strike missions in lesser-threat environments. The ESG also has more sophisticated command and control capabilities, especially in providing the C2 for a joint task force.

Today's naval strategy

The *Navy Strategic Plan* (NSP) of April 2006, signed by CNO Admiral M.G. Mullen, was published as the official strategy of today's Navy, and intended to inform investments for the future [1]. In particular it aims to provide mission-level guidance to those staff elements responsible for developing the 2008 budget submission. For this reason, the strategy links the higher-level guidance of the National Command Authorities with the Navy's programing and budgeting process. Unclassified guidance in the same vein is now contained in the *Naval Operations Concept 2006*, signed by the CNO and the Commandant of the Marine Corps on 1 September 2006 [2].

Important in the Navy and Marine Corps strategy is the understanding that the Global War on Terrorism, now more commonly referred to as the long war, is a long-term struggle against a committed ideological opponent. This means that it will require patience, consistent

resolve, U.S. interagency cooperation, and the help of willing partners internationally. The long war will also require a broader range of mission sets for both the U.S. Navy and the U.S. Marine Corps. In particular, the Combatant Commander needs forces that can respond to a variety of different and non-traditional threats, primarily at the low to mid level of intensity, while still maintaining conventional campaign capabilities. The key will be keeping the irregular warfare response capability as far forward and immediately available as possible, while maintaining high-end conventional capabilities in the rear.

The naval strategy also recognizes that the capability to conduct proactive shaping and Theater Security Cooperation (TSC) tasks, while postured to disrupt and attack terrorist networks when they are identified, will be invaluable to future Combatant Commanders. As the *Quadrennial Defense Review* (QDR) 2006 makes clear, what we in the past have thought of as "non-traditional" mission sets — e.g., counterterrorism, humanitarian affairs, disaster relief, counter-piracy, peace-keeping, and peace enforcement — are no longer appropriately considered lesser included subsets of the ability to conduct major combat operations [27]. Rather, they are required capabilities in themselves, and for day-to-day engagement as well as response to emerging targets in the long war, probably more important. This is a key point for any discussion of the MEU's suitability for the future threat and engagement environment.

Strategic defense policy guidance for 2006

With that knowledge of how the of U.S. naval strategy evolved in the decade following the end of the Cold War and immediately following the events of 11 September 2001, we now turn to the view from the top: the defense guidance from the Secretary of Defense and the President. In particular, we will also look carefully at the results of the most recent *Quadrennial Defense Review*, completed in February 2006.⁴

^{4.} This most recent QDR was begun with an expectation of being completed in 2005, accounting for occasional references to the "2005 QDR", however, the project extended into the next year, hence became the 2006 QDR.

The QDR is the definitive guidance from the Defense Department's senior leadership as to where the department is and where it needs to go.

The National Defense Strategy

The National Defense Strategy, which is signed by the Secretary of Defense, represents the Department's overall approach to confronting the challenges of the changed international security environment facing the United States today [6]. In this document we do not find details about requirements that would translate directly to a Combatant Commander's desired lineup of forces; however, the strategic objectives and implementation guidelines provided do imply the kinds of capabilities that are needed to position forward under current conditions.

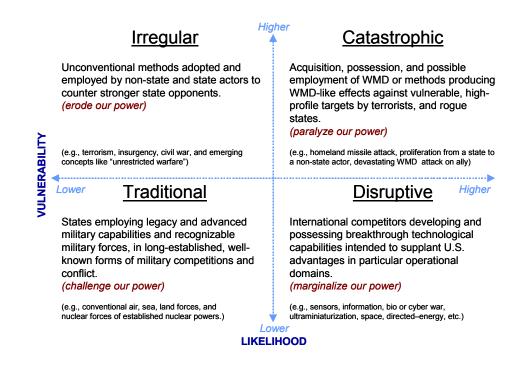
The defense of the nation must begin as far forward as possible, which means that expeditionary forces that are deployed in critical regions must have great flexibility of engagement capacity. As always, we need to keep our freedom of action by operating in the open areas — i.e., those where we are not dependent on transient national permissions or an increasingly sparse network of U.S. bases overseas. At the same time, we intend to continue building on partnerships and critical strategic alliances, mindful that the task before us is too big for a unilateral U.S. effort.

It is in the 2005 National Defense Strategy that the lexicon of emerging challenges is laid out in detail: traditional, irregular, catastrophic, and disruptive. The most pressing issue is the rise of irregular challenges, dramatically illustrated by the current extremist ideology of the global Jihadist insurgency. In combating this insurgency, the most valuable assets to the geographic commander are rapid-reaction irregular warfare, counterinsurgency forces that can be called upon now. If these same forces can also be useful in security cooperation and response to HA/DR missions and peace operations, so much the better.

Figure 2 takes the definitions of the four future challenges to U.S. security and expresses them in a vector chart. The United States maintains considerable superiority in legacy as well as advanced

military capabilities. It is not in that quadrant that the future fight is likely to be found, however. As discussed above, the long war will almost certainly be joined in the other corners of this diagram — in particular, in the upper left, where the Islamic insurgent employs non-conventional, asymmetric means. This chart is intended to emphasize that the country's resources and strategic thinking need to move up out of the traditional corner to which the long Cold War has consigned them [6].

Figure 2. The four challenges to the United States in the new century^a



a. Adapted from [27].

Although the *National Defense Strategy* is broad and strategic, a careful reading does yield the outlines of operational capabilities. As an example, better, more responsive intelligence, and persistent sources of ISR will be essential to the global war on Islamic militancy. This strategy also makes clear that independent operations, free of extensive logistics trains and able to come from the sea, will be most useful

to commanders, given the distant and often ungovernable spaces in which they may operate. Coupled with the freedom to act that is guaranteed by operating from what is called the "global commons" is the capacity for irregular operations over extended time periods — a clear necessity for the long war.

The *National Defense Strategy* discusses military presence abroad and makes it clear that we are moving to a combination of tailored and reduced forces based overseas, augmented increasingly by rotational force packages. Four regions of the globe are singled out for continued and persistent U.S. presence: Europe, Northeast Asia, the East Asia littoral, and the Middle East/Southwest Asia regions. The permanent presence of U.S. forces in these critical regions helps assure our partners while dissuading military competition and deterring aggression.

Because our permanent basing structure overseas is shrinking, an increasing premium is put on readily deployable forces that, once in theater, make minimum demands on the logistics and basing infrastructure while providing a range of capabilities for shaping and "phase zero" actions as well as crisis response and quick-response offensive actions against the global insurgent. This point is key in light of the wide-ranging flexibility and rapid-response of the forward-deployed MEU.

The National Security Strategy

Another high-level document with national guidance for defense organization and prioritization of resources is the *National Security Strategy*, signed in March 2006 by the President [28]. Again, in a national-level document of this scope, specifics on force requirements at the Geographic Combatant Commander level are elusive. the *National Security Strategy* in particular is geared to national-level strategic goals such as helping create a world of democratic, well-governed states that can meet the needs of their citizens and conduct themselves responsibly in the international system. This presidential strategy makes it clear that the primary emphasis of the U.S. Defense Department over the coming several years will be the global contest with Islamic militancy.

The *National Security Strategy* does reinforce the 2006 QDR, which we turn to next. In particular, the Defense Department is cited as transforming itself to better balance its capabilities across the four categories of challenges introduced in the *National Defense Strategy*: traditional, irregular, catastrophic, and disruptive. The point is that the U.S. force structure and capability "tool chest" must shift from coping with the traditional to addressing the irregular. That set of tools must now include the sorts of counterinsurgency capabilities required for the long war against global extremism.

The Quadrennial Defense Review 2006

In the *Quadrennial Defense Review*, published in February 2006, we can examine how the senior defense leadership envisions operationalizing the national-level strategy articulated in the previous two publications [27].

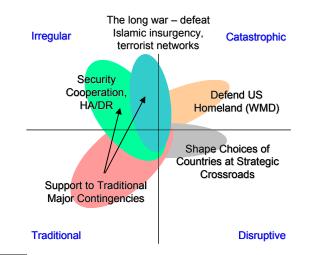
Most importantly, this most recent QDR quite clearly seeks to set the priorities for a change in the mix of U.S. military capabilities in key areas. Essentially, the objective is to make U.S. military forces more agile and more expeditionary. The technological basis for doing so is clear: a combination of dramatic improvements in information management, to include intelligence, and in precision weaponry, both of which allow equal (or in some cases even greater) combat power from fewer weapons platforms and combatants. The transformational aspect will be a significant improvement in low-intensity warfare — in particular, the sorts of counterinsurgency operations that characterized our most recent experience in Iraq. These two things in combination will set the stage for U.S. involvement in the long war.

In the previously examined publications, much has been said about the changing face of the military threat to U.S. global interests. The QDR seconds these conclusions. Greater emphasis must be given to countering global terrorism and to irregular warfare activities in support of the Islamist challenge, which we now understand as the long-duration unconventional warfare conceptualized as the long war. This also includes military support for stability operations and the shaping activities associated with security cooperation.

Do to its dispersed nature, the global terrorist threat in particular demands a decentralized response. This means force packages that can be separated into individualized modules that will be self-sufficient in often isolated and remote regions. The prevalence of irregular warfare in future conflicts has been noted by virtually all of the reference material covered thus far, and the QDR emphasizes this aspect as a certainty.

Figure 3 is a slight modification of the figure that appears in the 2006 QDR. This diagram, now popularly known as the "quad chart," shows how the Department of Defense is shifting its "tool kit" of capabilities to address threat areas that are more likely in the new international environment. The 2006 QDR built on the strategic foundation of the 2005 *National Defense Strategy*, which recognized that our future enemies are more likely to pose asymmetric threats than conventional ones. The QDR refined and extended those changes into programmatic elements of force composition, and summarized the new vector as moving the U.S. military up and to the left into the green and blue areas on the chart.

Figure 3. U.S. military response to the four emerging challenges^a

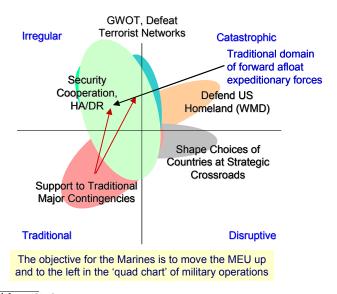


a. Adapted from [27].

The important message for this analysis is that the conventional capabilities of our forces are henceforth going to be shifted primarily up and to the left in this diagram — increasing the emphasis on irregular conflicts to deal with global terrorism and on shaping and phase zero operations, while maintaining the ability to defend ourselves conventionally.

Figure 4 repeats the 2006 QDR quad chart, pointing out the area most suited to the capabilities of forward afloat naval expeditionary forces. Since the Navy and Marine Corps strategists began making changes at the end of the Cold War, naval expeditionary forces have been moving in the direction of smaller-scale, forward, and distributed operations against asymmetric and irregular threats while maintaining the capability to operate conventionally within the limits of their size and equipment. This shift is the most significant development in U.S. naval strategy since the end of the Cold War, and has direct applicability to the future of the MEU.

Figure 4. The role of forward afloat expeditionary forces in confronting the four emerging challenges to the United States^a



a. Adapted from [27].

Combatant Commander's perspective

Finally, in our definition of the requirement — the demand signal for forward afloat expeditionary forces — we consider the operational level. Here we enter the domain of the geographic Combatant Commander. How does the COCOM see his requirements? In answering this question, we examined the planning guidance that goes from the Secretary directly to the Combatant Commander. The *Contingency Planning Guidance* (CPG) and the *Strategic Planning Guidance* (SPG) have direct implications for the kinds of forces and capabilities required by the COCOM to carry out the articulated strategies [29, 30]. The *Security Cooperation Guidance* (SCG) is intended, among other things, to help the COCOM prioritize resources in building international partnerships [18].

Planning guidance from the Secretary

The Contingency Planning Guidance fulfills the Title 10 requirement for written policy guidance to the Chairman of the Joint Staff and the geographic Combatant Commanders for preparing and reviewing contingency plans [30]. The current CPG, signed by the Secretary on 19 September 2005, is based on force capabilities projected to be available to the COCOM through 2006. Two concepts stand out in the current CPG: rapidity of response, and the linkage between contingency planning and peacetime security cooperation efforts. It is a priority in this guidance that the COCOM have forward-deployed forces with which to seize the initiative quickly in the fast-moving, intelligence-based scenarios anticipated in the global contest with radical Islam.

The Strategic Planning Guidance — FY 2008-2013, signed on 24 February 2006, is intended to implement the 2006 QDR, serve as a guide for planning and programming, and move the Defense Department closer to developing joint capability portfolios to meet the needs of the COCOMs [29]. This guidance underscores the objective graphically displayed in the quad chart in figure 4, the need to move the military capabilities of the Services up and to the left in anticipation of dealing with the global, irregular war against extremism. Without getting into the classified details, a strong injunction contained in all of

the strategic guidance received by both the services and the COCOMs is the need to take appropriate risk in the area of conventional capability in order to have the tools for the long war.

The bottom line for the COCOM

In rounding out our picture of the operational level of required capabilities for the long war, we examined additional sources. Among them were the Secretary's Security Cooperation Guidance, various Combatant Commanders' Integrated Priority Lists (IPL), the Global Force Management (GFM) process, and regional operational plans developed and held by the COCOMs [18, 31]. This last category included the National Military Strategic Plan for the WOT, signed on 1 February 2006 [32]. The regional strategies at the geographic commander level are also consistent with the future threat estimates and strategic environments described in national guidance and the development of naval strategic thought. Both sources reflect the centrality of the CONPLAN 7500 family of campaign plans to regional force posture and employment priorities.

As mentioned above, the details of our inquiry at the operational level are contained in the classified appendix to the CNA annotated briefing, *The Future Requirement for Forward Afloat Expeditionary Forces*, 31 July 2006 [3].

In summary, after examining the requirements from the Combatant Commander's operational perspective, our assessment is that the set of capability requirements developed out of our analysis of naval and national guidance is sound. The geographic commander still requires conventional forces forward, as he always has, but today he is more in need of flexible forces that can move rapidly and respond to a variety of distributed taskings. The rising importance of security cooperation activities and the concepts of shaping and phase zero make scalable and modular forces more desirable. The COCOM needs forces that can disperse across an AOR to conduct training exercises with partner countries, to provide humanitarian assistance, and to perform other functions well to the "left" of conflict resolution — yet also be able to aggregate and respond rapidly back to the "right" on the conflict spectrum.

It is safe to say that as the Combatant Commanders refine their subsidiary theater campaign plans for the long war, force capabilities in general will come more and more to be evaluated against our plans to counter global extremism. It will no doubt take some time to make the shift away from our longstanding conventional organization and force rosters. As the 2006 Strategic Planning Guidance makes clear, however, we are now at the point where the services and the geographic commanders they support can afford to adjust their traditional risk calculus in favor of force compositions with necessary attributes for irregular warfare.

Strategy expressed as required capabilities

What follows is a distillation of required capabilities taken from a synthesis of the force planning guidance reviewed in this section. This set of required capabilities articulates what the COCOM will use to engage the long war, and it is framed as the set of capabilities required of forward-deployed forces. The list is taken from the several naval strategy papers and official documents articulating the shift in strategy over the course of the decade of the 1990s and into the post-9/11 era. It includes capabilities mandated in current strategic defense policy guidance from the National Command Authorities. Finally, the list adds requirements contained in guidance to the COCOMs from the Secretary of Defense as well as other operational planning factors affecting the geographic commander's threat analysis. This essentially answers the question we asked at the outset of this section — "Just what is it we need the MEU to be right for?" It is this list against which we evaluate the MEU for continued relevance to the COCOM.

Required Capabilities:

- Operate from a seabase or some other perch within the global commons.
- Engage as far forward as possible in a given theater.
- Operate successfully in a dispersed or distributed condition, remaining netted and sustainable in distant environments.

- Operate easily in an interoperable, scalable mode with friendly nations.
- Enhance the capabilities of foreign militaries, especially their maritime security capabilities. This implies a need for U.S. forces with language skills and sound cultural awareness.
- Organize in a modular way, providing as wide an array of capabilities up and down the scale as possible, to include urban warfare.
- Provide the COCOM with highly mobile, expeditionary capabilities.
- Reorganize and composite in unusual ways in response to a highly unpredictable and diverse threat.
- Operate easily in declining overseas infrastructure and a smaller force reconstitution base at home.
- Dominate across the spectrum in the maritime environment, from the open ocean to the littoral and rivers, including power projection from brown water.
- Move around rapidly with low support overhead and modest logistical tail, yet be robust enough in combat capability to influence events ashore.
- Respond rapidly with the flexibility to disrupt and attack terrorist networks, yet remain postured for conventional combat.
- Provide forces suited to the requirements in the 7500 series CONPLANs.
- Provide distributed, persistent sources of intelligence, surveillance, and reconnaissance (ISR) as well as resources for human intelligence gathering.
- Provide expeditionary command and control (C2) capability.
- Provide direct support to consequence management (CM) operations.
- Assist in the COCOM's widely dispersed, highly interactive Security Cooperation Strategy — "useful presence."

- Provide useful forces for shaping and the concepts of "phase zero."
- As part of both of the above, provide forces for humanitarian assistance/disaster relief (HA/DR) missions.
- Disperse and operate efficiently, then aggregate and expand quickly.
- Task-organize by capabilities, not doctrine, in order to be joint and interoperable.
- Maintain freedom of action and independence in changing circumstances.
- Sustain irregular warfare over extended periods of time with non-state threats.
- Execute show-of-force missions to control an escalating crisis situation.
- Conduct Maritime Interdiction Operations (MIO).
- Plan "on the fly" and provide speed of action early in a time-sensitive crisis.
- Provide strong unconventional capabilities in counterinsurgency and counter-terrorism (CT).
- Provide modular, smaller but capable, ground forces that are largely self-sustaining.
- Operate from an Afloat Forward Staging Base (AFSB) with SOF forces.

The above list of required capabilities conveys a clear message: the global security environment that succeeded the Cold War, having been made more imperative by 9/11, is now applicable to the long war, and requires an emphasis on self-sufficient, flexible, task-organized forces. This means force packages that can operate across the spectrum of conflict from cooperative, other-than-war operations with partner nations, through low-intensity counterinsurgency, to conventional crisis response when suitably reinforced by surge forces from the rear.

The Combatant Commander's requirement examined

Following that background, and with the list of 29 COCOM requirements in place, we worked at "clumping" like or related requirements into segments. We built word pictures of the associated capability requirements to help us describe the kinds of forces that tomorrow's geographic commander will want forward-deployed in his AOR. We ended up with six general descriptions of force capability requirements. We should stress that from the perspective of the COCOM, these capability requirements are not applicable to the MEU alone. These are descriptions the combatant commander will apply to any forward-deployed forces available for security cooperation, shaping, and rapid-reaction to crisis.

- 1. The autonomy of the global commons. The requirement is to operate from what we are calling the "global commons," which means primarily seabased with the freedom of action inherent in not being tied to a fixed base ashore. This implies forces useful in the maritime domain, on the sea and in the close-in waters near land where small craft used in terrorist movements are found. The sources used for this research make much of extra-sovereignty and the need to mount incursions or intrusive entries into a particular country without the support of any nearby country. Research indicates that the lack-of-access problem is probably overstated, but the capacity to be autonomous, especially far forward and in otherwise inaccessible places, is going to be important in the future [33]. Part of the requirement to operate easily in the maritime commons is the need to intercept and search a variety of vessels at sea under different conditions.
- 2. **Task organized and joint.** We will need forces that have organizational and logistic flexibility, which includes the ability to break down into meaningful subsets and operate in a distributed mode. Added to this need for modularity is the need to confront a number of different mission sets with the same forces, which implies that forces will be task organized from a variety of functional organizations. This essential flexibility includes the need to work easily in a joint environment, since

- so much of what the Combatant Commander does in the new security environment will be done with joint forces and under the leadership of joint task forces.
- 3. Robust distributed operations. Because the threat is indefinite and widely separated that is, not contained within or by a single identified country, we will need highly mobile forces, preferably with their own organic mobility assets. Due to the nature of a terrorist or insurgency threat, we will favor light and expeditionary forces which can be employed quickly, and which are capable of rapid planning from receipt of a mission order to execution. Because of the independent nature of distributed operations and the need to operate forward of established bases, forces will need robust, expeditionary C2 capabilities ideally the capability to become the core of a joint task force operating in a remote, inaccessible area.
- 4. Long-dwell counterinsurgency operations. A principal requirement for future forces will be combating international insurgent networks in various locations around the globe. Antiterrorist and counterinsurgency operations are low-intensity operations, characterized by small unit actions supported by timely, human-based intelligence. Future forward-deployed forces will have to be comfortable addressing the threats spelled out in the 7500 series CONPLANs. This will require strong ISR capabilities, especially the required platforms and technologies for persistent, long-dwell ISR, as well as organic HUMINT collection and analysis capability.
- 5. **Phase zero, shaping, TSC.** A vital component of the long struggle against Islamic extremism and the international insurgent or terrorist networks that accompany that phenomenon is the non-kinetic effort. This includes all of the activities referred to as "shaping" and as contributing to the concept of "phase zero." These include the activities listed by the Combatant Commander under his TSC Plan and involve exercises with partner country militaries, port visits, various levels of assistance to foreign countries, training of foreign militaries, and HA/DR. These activities, while not directly related to combat, are key ingredients in the strategy of denying the global insurgency the

- support of the indigenous populations in which they live and operate. One implication of the requirement to work closely with partner and coalition countries is that forces must have language skills and sound cultural awareness.
- 6. Conventional combat. Underlying all these sets of required capabilities is the ability to engage in meaningful traditional combat across a significant range of the violence spectrum. This includes the ability for the separated pieces of a task organized force to reassemble quickly and fight as a coherent whole, reinforced appropriately from the rear. At the same time, as the 2006 QDR makes clear, Combatant Commanders in the future will have to accept some degree of risk in the sphere of conventional combat in order to make available the required forces, logistic sustainability, and lift for the low-intensity, distributed conflicts that will be characteristic of the long war.

Baselining the MEU capabilities

Before analyzing the relevancy of the current MEU for the future security environment, we must establish a baseline for comparison. It is the baseline information in this section that we later analyze in light of the required capabilities to determine the appropriate fit of the MEU to the future.

We begin this section with a brief description of a general Marine Air Ground Task Force (MAGTF), followed by a more specific description of a standard MEU. We establish the baseline component, characteristics, and capabilities of the MEU as defined in current Marine Corps doctrine and orders. A reassessment of the capabilities of the MEU is currently underway, conducted by Plans, Policies, and Operations (PP&O), Headquarters, Marine Corps [34]. That assessment may change the future capabilities of the MEU. In addition, the recent establishment of U.S. Marine Corps Forces Special Operation Command (MARSOC) as a component of U.S. Special Operation Command will impact the roles, missions, and organization of the MEU. The relationship between MARSOC and the MEU is currently being defined and has not yet been codified in doctrine. Therefore, we focus this baselining effort on describing the current, typical MEU.⁵

General description of a MAGTF

The MAGTF is the primary Marine Corps task organization for combat. The composition of a MAGTF is tailored to meet the operational requirements of a specific mission in order to provide a customized response [35, 36]. Therefore, a MAGTF is organized, trained, and equipped to succeed at its assigned mission. Although the structure

^{5.} As the nature of these impacts is better understood, the baseline of the MEU will be adapted to incorporate the necessary changes.

of a MAGTF may be altered as necessary, it will always include four organizational elements:

- Command element (CE)
- Ground combat element (GCE)
- Aviation combat element (ACE)
- Combat service support element (CSSE).

These four elements bring together Marine forces from across the service, including ground, air, and service support, to assemble into a warfighting force. This task force is designed to be readily available and self-sustaining, and to exploit the inherent advantages of a combined-arms force [35]. The three basic types of MAGTFs are a Marine Expeditionary Force (MEF), Marine Expeditionary Brigade (MEB), and Marine Expeditionary Unit (MEU). Regardless of size, all MAGTFs are inherently capable of:

- Entering and exiting a battle area at night
- Locating, surveilling, and assessing the enemy
- Engaging, destroying, or capturing the enemy in a variety of settings and environments.

In addition to these capabilities, a MAGTF can undergo specific training and certification to become special operations capable (SOC) [35, 37, 38]. This enables the MAGTF to conduct maritime special operations [35], including:

- Close-quarters battle
- Specialized breaching
- Clandestine reconnaissance and surveillance
- Tactical recovery of aircraft and personnel
- In-extremis hostage recovery
- Seizure and destruction of offshore platforms
- Rapid planning and execution of assigned operations

These additional capabilities are designed to be used simultaneously with the inherent capabilities presented above if necessary.

We now turn to the describing the specific composition of the smallest basic MAGTF, the MEU.

Specific description of a MEU

MEUs are routinely deployed to forward locations to maintain presence and quickly respond to developing crises. MEUs are typically deployed for six months on naval shipping, forming a seabased, naval expeditionary force. The MEUs were designed to execute limited duration amphibious operations, act as an advance force, and provide a wide spectrum of quick-responses. To support its operations, a MEU typically carries 15 days' worth of supplies. Currently, the Marine Corps has seven standing MEUs: the 22nd, 24th, and 26th MEUs are on the East Coast; the 11th, 13th, and 15th MEUs are on the West Coast, and the 31st MEU is in Japan.

Organizational components of the MEU

As currently structured, a MEU is built around a reinforced infantry battalion, a reinforced helicopter squadron, and a MEU service support group. A MEU typically contains approximately 2,200 Marines and 100 sailors [39]. Table 1 presents the typical number of personnel associated with each major component of a MEU.

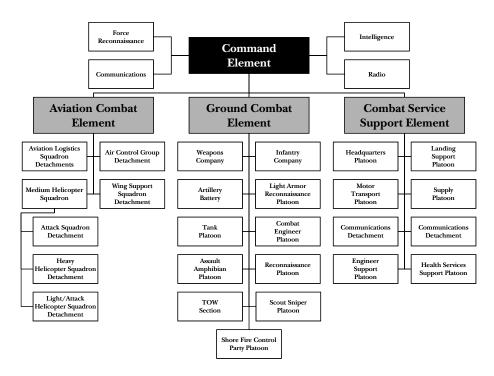
Table 1. Typical personnel in each MEU component^a

	USMC	USN
MEU element	officer / enlisted	officer / enlisted
Command element	252 / 140	1/3
Ground combat element	59 / 1,086	3 / 50
Aviation combat element	75 / 337	1 / 4
Combat service support element	15 / 235	3 / 22
Total	401 / 1,798	8 / 79

a. Adapted from [39].

Figure 5 shows the typical organizational structure of MEU personnel. Following this figure we briefly discuss of each of the four major elements of the MEU [35, 36, 39]. We also describe the major equipment of the MEU and the MEU's relationship with naval shipping.

Figure 5. Standard organizational components of a MEU^a



a. Adapted from [36]and [39].

Command element

The command element provides the MEU commander with the necessary support and communications to provide command and control during operations. The command element ensures effective planning before operations and interoperability of the GCE, ACE, and CSSE during operations. The MEU commander establishes mission intent for the GCE, ACE, and CSSE, to achieve unity of effort. To support these efforts, the command element contains force reconnaissance, force imagery interpreters, interrogator translators,

counter-intelligence, topographers, radio, communications, and universal spotters.

Ground combat element

The ground combat element is tailored to conduct ground operations. This force is built around a reinforced infantry battalion that includes three infantry and one weapons companies. This infantry battalion is reinforced with artillery, engineering, light-armored infantry, anti-armor, assault amphibian, and division reconnaissance assets. With these additions the battalion is designated a battalion landing team (BLT).

Aviation combat element

The aviation combat element is tailored to conduct tactical air operations and provide assault support, close air support, airborne command and control, and air defense. This force is built around a medium helicopter squadron that is augmented with heavy and light attack helicopters, attack aircraft, refueler/transport aircraft, a Marine air control group detachment, a low-altitude air defense section, and a Marine wing support group detachment.

Combat service support element

The combat service support element of the MEU is tailored to provide service support functions not internal to the other elements of the MEU. The functions provided by a MEU service support group typically include headquarters, communications, engineer support, maintenance support, motor transport, landing support, supply, and medical platoons.

Major equipment of the MEU

Equipment plays a key role in the ability of the MEU to operate and execute its missions. In the following sections, we list some the major equipment items that the MEU normally carries by element [39].

Command element:

• (1) Mobile Electronic Warfare Support System Light Armored Vehicle (MEWSS LAV)

- (14) High Mobility Multipurpose Wheeled Vehicles (HMMWV)
- (6) Combat Rubber Reconnaissance Craft (CRRC)
- (1) Joint Task Force Enabler

Ground combat element:

- (7) Light Armored Vehicles (LAV)
- (15) Assault Amphibian Vehicles, AAV7A1s
- (4) Main Battle Tanks, M1A1
- (6) 155mm Howitzer Cannons, Towed, M198s
- (20) Combat Rubber Reconnaissance Craft (CRRC)
- (15) 5-Ton Trucks or MTVRs
- (8) 81mm Mortars, M252s
- (8) Tube Launched, Optically Tracked, Wire-Guided (TOW) Missile Weapon Systems
- (64) High Mobility Multipurpose Wheeled Vehicles (HMMWV)
- (7) Interim Fast Attack Vehicles (IFAV)

Aviation combat element:

- (12) CH-46 Sea Knights or (12) MV-22B Osprey
- (4) CH-53E Super Stallions
- (4) AH-1W Super Cobras
- (2-3) UH-1N Hueys
- (6) AV-8B Harriers
- (2) KC-130 Hercules
- (2) Avenger Weapons Systems
- (3) Stinger Weapons Systems

• (5) High-Mobility Multipurpose Wheeled Vehicles (HMMWV)

Combat service support element:

- (2) Reverse Osmosis Water Purification Units (ROWPU)
- (5) Refuelers
- (1) Hercules Recovery Vehicles, M88A1
- (8) 5-Ton Trucks or MTVRs
- (1) Assault Amphibian Vehicles (Recovery) (AAVR7)
- (18) High Mobility Multipurpose Wheeled Vehicles (HMMWV)
- (2) Armored Combat Earthmovers (ACE)
- (1) Countermine Bulldozer, D-7
- (1) SEE Tractor

Naval shipping and the MEU

One of the characterizations that makes a MEU unique among MAGTFs is its relationship with naval amphibious shipping. While many MAGTFs are assembled to respond to an emerging or occurring crisis, a MEU is regularly deployed to respond to potential crises. The MEU regularly deploys on naval vessels forming an amphibious ready group (ARG). Typically these vessels include one amphibious Assault ship (LHA-1 or LHD-1), one amphibious transport dock (LPD-4 or LPD-17), and one dock landing ship (LSD-41 or LSD-49). It was in this formation that the MEU regularly deployed, until recent adaptations introduced the expeditionary strike group (ESG). The inclusion of a guided missile crusier, guided missile destroyer, frigate, and attack submarine along with ARG and MEU assets increases operational flexibility and expands warfare capabilities. Although the MEU and the ARG on which it is embarked form an integral component of the ESG, we are able to assess the MEU's inherent capabilities separately. In this analysis we consider the roles and missions of the MEU independently from the ESG. We address the ARG only to the extent that it consists of three ships deployed for six months.

Establishing the capability set of the MEU (SOC)

In this section we present a baseline of expectations regarding performance of the MEU. In military terms a "capability" is the capacity inherent in training, equipment, and personnel to accomplish an assigned mission — that is, the ability to execute a given course of action. A course of action is made up of some number of supporting tasks which are accomplished in certain environmental conditions and to a set of specifications acceptable to the higher authority assigning the mission [40]. In describing or listing the capabilities of the MEU (SOC), we begin with the Marine Corps Order, MCO 3120.9B, which contains the Marine Corps' policy for its MEU (SOC) [39]. The order establishes the MEU (SOC) mission, core capabilities, and mission essential tasks (MET). The order also identifies the MEU baseline structure and major end items of equipment, while ensuring a unified and coordinated Marine Corps policy regarding the MEU (SOC) program and the certification process for deploying units.

MEU mission

The broad mission of the MEU, as presented in Marine Corps Order 3120.9B, is to "provide a forward-deployed, flexible, seabased Marine Air Ground Task Force capable of rapidly executing amphibious operations, designated maritime special operations, military operations other than war, and supporting operations to include enabling the introduction of follow-on-forces." [39]

MEU characteristics

Several common characteristics can be defined to support the execution of the operations outlined in the MEU's mission statement. Within these characteristics we find a good, if macro, assessment of the capabilities of the unit. These characteristics ensure that the MEU provides the Combatant Commander with a force capable of supporting the COCOM's operational priorities. The four characteristics defined in Marine Corps Order 3120.9B are presented below [39].

Characteristic 1: Forward presence with operational flexibility

The MEU provides forward presence in a force embodying operational flexibility. In particular, the rapid-response forces of the MEU and its associated amphibious squadron provide the Combatant Commander with:

- Continuous, non-provocative but credible presence, which provides an unobtrusive and flexible first response for the Combatant Commander in a crisis
- A positive signal of U.S. commitment to the region and a visible deterrent to anti-U.S. threats
- A tool available for shaping and TSC duties for the promotion of regional stability.

Characteristic 2: Rapid-response

Because the MEU is forward-deployed on combat loaded ships, it is capable of rapid-response to a variety of situations:

- It can plan and begin operations within six hours of receiving a warning order or mission tasking
- It is able to secure critical staging areas ashore in advance of a larger force's arrival
- It contains organic C2 capability to control a developing situation from the outset, while preparing for larger, joint and combined, forces.

Characteristic 3: Task organized for multiple missions

The force itself is task organized from a variety of combat and combat support units, making it suitable for a number of different missions, including:

- Missions ranging from humanitarian relief operations and security cooperation engagement, to limited amphibious assault and conventional combat operations ashore
- Selected Maritime Special Operations missions

• Missions that call for the ability to transition easily between different operational environments.

Characteristic 4: Seabased, strategic reach with inherent force protection

Being seabased gives the MEU its own operational mobility, inherent force protection, and a degree of logistic self-sufficiency.

Seabasing allows the MEU to operate independently, free from established ports or airfields, and not be subject to basing agreements. This means that the MEU:

- Has politically unencumbered access around the world
- Can remain on station, over the horizon, without revealing its intentions
- Can quickly withdraw back to the ships at the end of an operation.

MEU core capabilities

While the MEU can be described by the above four characteristics, it also must maintain certain capabilities to execute its assigned missions. These capabilities are split into four operational areas, and give us another direct source of capability data for today's MEU. The four capabilities are defined in Marine Corps Order 3120.9B, and are presented below [39].

Capability 1: Amphibious operations

The MEU is essentially an amphibious force, ideally employed from its shipping and sustained by that shipping once ashore. MCO 3120.9B makes clear that a core capability of the MEU is landing on a hostile shore. Deployed ashore, the MEU is capable of combat operations which are limited in scope and duration.

Capability 2: Maritime special operations

Because of its training and unique task organization, the MEU provides a variety of maritime special operations, including selected direct action missions.

Capability 3: Military operations other than war

Also because of its task organization and robust combat service support attachments, the MEU can provide a range of military operations other than war.

Capability 4: Supporting operations

The MEU is ideally structured to provide supporting operations to other, joint/combined, or differently engaged forces, to include enabling the introduction of follow-on forces.

MEU (SOC) Mission Essential Tasks

After describing the MEU's characteristics and core capabilities, the MCO goes on to be much more detailed about the mission-specific capabilities of the MEU. The MEU has a set of 23 Mission Essential Tasks which it must be certified as capable of performing prior to its deployment. It is to this set of standards that the MEU, in company with the PHIBRON, trains during the approximately six months of work-up and training prior to deployment. This period of intense training and preparation is called the Predeployment Training Period (PTP), and it culminates in a certification exercise during which the MEU is certified special operations capable (SOC) by the appropriate Marine Force Commander.

The Mission Essential Task concept was developed as part of the evolution of the Defense Readiness Reporting System (DRRS), which emerged from the 2001 QDR. Following that QDR, the Secretary of Defense directed the services to develop comprehensive readiness reporting systems that would evaluate their readiness based on actual missions and capabilities assigned to operating forces. Shortly thereafter, the COCOMs and their components were directed to begin reporting unit readiness in the DRRS by assigned Mission Essential Tasks [41].

Core-capability Mission Essential Tasks constitute the standards that define the expected output of a particular unit. They are used at the tactical level to define the resources and the training requirements that ensure the fielding of all necessary warfighting capabilities for the given mission, and, further, to ensure the integration of those capabilities across the spectrum of DOTMLPF.⁶

MCO 3120.9B assigns 23 METs to the MEU (SOC) [39]. The MCO does not intend these METs to be all inclusive, but rather to form a core arsenal that can be adapted as necessary. The Marine Corps highlights them in its MEU policy order to provide military and diplomatic decision-makers a scale of available responses to potential crises situations across the spectrum of violence.

The following are the 23 METs assigned to the MEU (SOC) by MCO 3120.9B [39]:

- 1. *Amphibious assault*. The principal type of amphibious operation that involves establishing a force on a hostile or potentially hostile shore.
- 2. *Amphibious raid*. An amphibious operation involving swift incursion into or temporary occupation of an objective followed by a planned withdrawal.
- 3. *Amphibious demonstration*. An amphibious operation conducted for the purpose of deceiving the enemy by a show of force with the expectation of causing the enemy to take a course of action unfavorable to him.
- 4. *Amphibious withdrawal*. An amphibious operation involving the extraction of forces by sea in U.S. Navy ships or craft from a hostile or potentially hostile shore.
- 5. Direct action operations. Short-duration strikes and other small-scale offensive action to seize, destroy, capture, recover, or inflict damage on designated personnel or material. In the conduct of these operations, units may employ raid, ambush, or direct assault tactics; emplace mines and other munitions; conduct standoff attacks by fire from air, ground, or maritime platforms; provide terminal guidance for precision-guided

^{6.} DOTMLPF stands for Doctrine, Organization, Training and Education, Materiel, Leadership Development, Personnel, and Facilities. Marine Corps METs are catalogued and described in [41].

- munitions; conduct independent sabotage; and conduct anti-ship operations.⁷
- 6. Tactical recovery of aircraft and personnel (TRAP). Rescue or extraction, by surface or air, of downed aircraft and/or personnel, equipment. Includes aircraft sanitization, and provision of advanced trauma life support in a benign or hostile environment.
- 7. *Security operations*. Protection of U.S. personnel and property (or those of a designated allied/friendly nation).
- 8. *Humanitarian assistance and disaster relief (HA/DR)*. Assistance to relieve or reduce the results of natural or man-made disasters or other endemic conditions such as human pain, disease, hunger, or privation that might present a serious threat to life or that can result in great damage to or loss of property.
- 9. *Noncombatant evacuation operations (NEO)*. Operations directed by the Department of State whereby noncombatants are evacuated from foreign countries to safe havens or to the United States, when their lives are endangered by war, civil unrest, or natural disaster.
- 10. *Peace operations*. Encompass peacekeeping and peace enforcement operations conducted in support of diplomatic efforts to establish and maintain peace.
- 11. Provision of command, control, communications, and computers (C4). Provision of an integrated system of doctrine, procedures, organizational structures, personnel, equipment, facilities, and communications designed to support a commander's exercise of command and control across the range of military operations.

^{7.} A required sub-task of direct action operations in [39] remains visit, board, search and seizure (VBSS) Operations, which involve vessel boarding/seizure in support of maritime interception operations (MIO). The Marine Corps is in the process of turning this mission over to the Navy; however, at this writing, some MEUs are still VBSS trained and certified.

- 12. Fire support planning, coordination, and control in a joint/combined environment. Planning, coordination and control of fires from naval, air, and ground assets in support of U.S. and/or designated allied/friendly forces.
- 13. Limited expeditionary airfield operations. Tactical air operations from austere locations, including short-field, unimproved runways.
- 14. *Terminal guidance operations*. The guidance applied to a guided missile between midcourse guidance and arrival in the vicinity of the target. Electronic, mechanical, visual, or other assistance given an aircraft pilot or surface waves to facilitate arrival at, operation within or over, landing upon, or departure from an air/beach landing or airdrop facility.
- 15. Enhanced urban operations. Encompass advanced offensive closequarters battle techniques used on urban terrain conducted by units trained to a higher level than conventional infantry. Techniques include advanced breaching, selected target engagement, and dynamic assault techniques using organizational equipment and assets.
- 16. *Enabling operations*. Operations designed to facilitate the smooth transition of follow-on forces into the area of operations.
- 17. Airfield/port seizure. Securing of an airfield, port, or other key facility in order to support MAGTF missions, receive follow-on forces or enable the introduction of follow-on forces.
- 18. *Employment non-lethal weapons*. Operations planned with intent to minimize fatalities or permanent injuries and limit collateral damage by augmenting forces with non-lethal weapon systems.
- 19. Tactical deception operations. Actions executed to deliberately mislead the adversary's decision makers as to friendly forces' capabilities, intentions, and operations; thereby causing the adversary to take specific actions (or inactions) that will contribute to the accomplishment of the friendly mission.

- 20. *Information operations*. Actions taken to affect adversary's information and information systems while defending one's own information and information systems.
- 21. *Intelligence, surveillance, reconnaissance (ISR)*. The collection, processing, integration, analysis, evaluation, and interpretation of available information concerning foreign countries, areas, and/or adversaries relative to the mission and area of interest.
- 22. *Antiterrorism*. Defensive measures used to reduce the vulnerability of individuals and property to terrorist acts, to include limited response and containment.
- 23. Rapid-response planning process (R2P2). The time-constrained planning process that allows the commencement of mission execution within six hours of receipt of a mission.

MEU training

To ensure that all MEUs can provide the above capabilities and perform the above tasks, the MEUs systematically proceed through a standardized training plan, the PTP, before deploying. The goal of this training is to enhance conventional maritime capabilities. This well-developed pre-deployment training plan is outlined in Marine Corps Order 3502.3A [37]. While an individual MEU may modify this training plan to address anticipated needs specific to its deployment, all training plans follow the same general progression. The MEU pre-deployment training plan is both extensive and detailed. Below, we present a brief overview of the plan. (Please refer to [37] for additional details.)

The first focus of the pre-deployment plan is the stabilization of personnel. Several goals are established to have key personnel identified and in place by no later than 240, 210, and 180 days before deployment for the command element, the major subordinate elements and staff, and remaining personnel, respectively. These times are established to ensure sufficient integration time and to maximize the combined nature of the MEU [37].

The second focus of the pre-deployment training plan is standardization. To this end, the MEU undergoes both informal and formal evaluations throughout the training process. The focus of these evaluations is specific to the responsibilities of the various elements of the MEU [37].

The overall pre-deployment training plan takes 26 weeks to complete and can be divided into three phases: initial, intermediate, and final. The initial phase of the plan focuses on individual and small-unit skills. This phase training stresses the importance of fundamentals and lasts for 10 weeks. The intermediate phases focuses on conducting more collective training that builds on unit level fundamentals. This phase may be tailored to address identified weaknesses and increases overall strengths. The intermediate phase lasts for 8 weeks and includes training at sea and conducts a variety of larger-scale exercises. The final phase of training, which lasts for 8 weeks, is the culmination of all previous activities and solidifies the cohesive nature of the MEU. Additional exercises are completed, and the MEU prepares to depart for deployment [37].

Gap analysis

Earlier in this report we spent some time developing the requirement — that set of capabilities the Combatant Commander needs in his forward-deployed, rapid-reaction expeditionary forces. It is central to our conclusions in this paper that this requirement, what we have referred to as the "demand signal" has changed significantly since the end of the Cold War, and especially since the events of 11 September 2001 [42]. Yet the Marine expeditionary unit as constituted and deployed under the baseline structure laid out in MCO 3120.9B has changed little since the end of the Cold War [39]. There is no question that the MEU, under its current organizational construct and method of deployment, continues to provide both the COCOM and the National Command Authorities with a certified, versatile Marine air-ground task force that constitutes a formidable, seabased combat presence with the inherent operational flexibility to respond rapidly to a variety of critical missions. The question is, Does the Marine Corps need to change the composition, organization, equipment, or deployment pattern of the MEU to better suit it for the challenges of today's international security environment?

The COCOM requirement, as defined in national, service, and regional guidance, makes clear that the MEU needs to maximize its capability for distributed operations from the sea. This implies a better ability to operate in distributed packages against a dispersed and illusive enemy. It points to helicopter and surface lift, enabling clandestine entry from the sea, including small raids, and the capacity for other direct action operations. The MEU needs to concentrate on intelligence-based counterinsurgency operations; and to have a solid capability for seabased special operations, such as those outlined in the 7500 CONPLAN series. Quoting from an unclassified paragraph of the *Strategic Planning Guidance* for Fiscal Years 2008-2013;

Components will prioritize the capacity of general purpose forces to conduct highly distributed, parallel, irregular warfare operations, to include: improving skills sets and capacity for preventing acquisition of use of WMD. . . . counterinsurgency activities, stabilization operations and foreign internal defense. [29]⁸

Given the widespread presence of the threat and the fleeting nature of actionable intelligence in the world of counterinsurgency, continuous presence of a force such as the MEU, optimized for maximum coverage, provides the COCOM with a flexible tool for immediate use [27].

Matching requirements with capabilities

In this section we match the capabilities of the currently constituted MEU in its (SOC) configuration to the demand set — the COCOM requirements. An analysis of that comparison reveals both "gaps" and excesses. Gaps are capability sets required to meet the demands of the Combatant Commander that the MEU either does not possess or has developed to only a limited extent. At the other end of the scale are capabilities resident in the MEU for which tomorrow's geographic commander will have much less use than commanders of the past. For simplicity's sake, we are calling this a gap analysis, with the understanding that it will cover both deficits and surpluses in capability.

For the gap analysis we analyze three possible correlations. We first compare the set of COCOM required capabilities to the set of 23 mission essential tasks for the MEU (SOC) contained in Marine Corps

^{8.} The SPG reminds the Department that the 2006 QDR established winning the long war as a top priority for the Department, and that the services and the geographic components will accept increased risk in conventional capabilities that do not directly support the CONPLAN 7500 series. The emphasis on irregular, low-intensity conflict at the expense of traditional war fighting is unmistakable.

^{9.} In defining the core problems in defeating terrorist extremism the 2006 QDR terms of reference stressed the global nature of the coming conflict, citing extremist cells in a large number of countries and active Islamic insurgencies in more than a dozen countries.

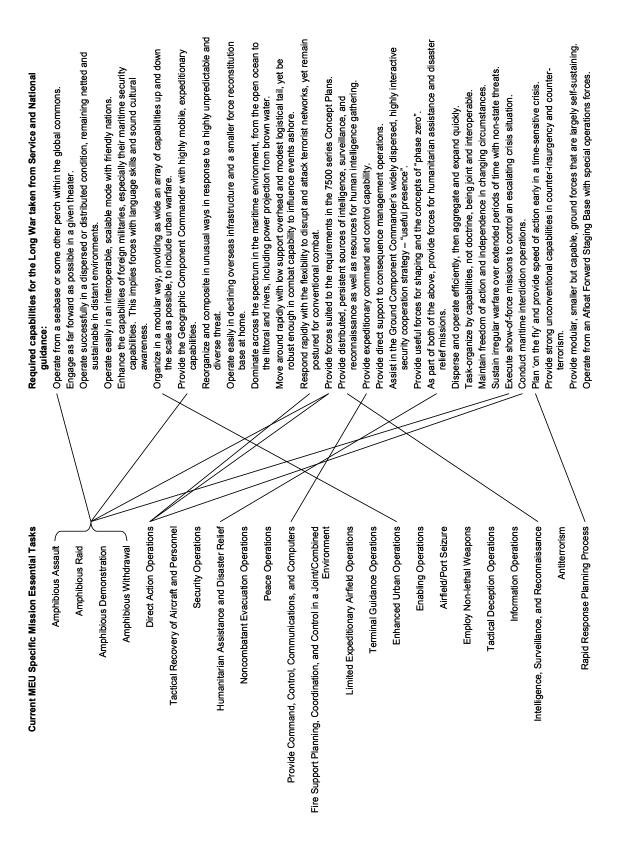
Order 3120.9B. Next we make the same comparison using the set of revised mission essential tasks provided to us by PP&O at Headquarters Marine Corps. Finally we set up a comparison using the MEU characteristics and core capabilities taken from the MEU description provided in MCO 3120.9B. As mentioned in the previous section, throughout our work we supplemented this comparison analysis with data gathered from interviews and our continuing review of actual reports from deployed or recently returned MEUs.

Figure 6 displays the first correlation. The set of required capabilities as previously derived on the part of the COCOM appears on the right-hand side of the figure. We faced off the derived requirement against the 23 mission essential tasks mandated for the MEU (SOC) and certified in the pre-deployment training and work-up schedule for each MEU. The METs are listed on the left side of the figure. We began here because the published METs are the mission standards defining what the MEU is expected to be able to do while in the Combatant Commander's AOR.

MEU METs vs. COCOM requirement correlation

The connecting lines in figure 6 are the associations that reflect those METs that directly answer one or more of the COCOM requirements listed down the right side of the chart. It was hoped that this process would reveal the MEU's ability to meet the given set of requirements out of its inherent capabilities, while showing us gaps and excesses. The results were disappointing. What the chart in figure 6 reveals is a direct correlation between the essential tasks that the MEU is trained to and the COCOM demand set in only 11 of the 29 specific requirements listed. This is counter-intuitive since we know from experience that the MEU is capable of answering many more of those requirements. It is also noted that a number of mission essential tasks do not correlate with any COCOM requirement.

Comparison of current MEU specific mission essential tasks with identified requirements Figure 6.



Closer examination of the data presented here shows that the COCOM requirements are phrased as general "abilities" that would characterize a force capable of addressing a given demand, whereas the more specific Mission Essential Tasks from the Marine Corps Order describe discrete missions the MEU is trained to carry out. The two data bases appear not to be structurally compatible.

Revised MEU METs

Discussions with the Director, Operations Division, Plans, Policies and Operations (PP&O)), Headquarters Marine Corps, revealed that the Marine Corps is in the process of revising its basic order establishing the policy for the MEU (SOC) in light of the formation of a Marine Corps Special Operations Command (MARSOC). One of the revisions is a "scrub" of the set of 23 Mission Essential Tasks to which the MEU trains and is certified before deployment. CNA was provided with a preliminary revision to the MET list, intended as a descriptor for the capabilities of the MEU projected out to 2015 [341].

The PP&O revised set of METs for the 2015 MEU in draft form as of 27 September 2006 is as follows:

- 1. Execute Rapid-Response Planning Process (R2P2).
- 2. Conduct Amphibious Raids.
- 3. Conduct Amphibious Assault.

The actual title of the newly formed Marine SOC command is "U.S. Marine Corps Forces Special Operations Command," abbreviated MARSOC.

^{11.} As part of their work on adjusting MEU capabilities for the future security environment, PP&O reported that they did not at this time see a need for any fundamental shift in MEU characteristics or core capabilities; however, they did foresee the future MEU as capable of operating in a more distributed fashion. They also confirmed that in the future, as in the past, the MEU would not routinely be expected to conduct opposed amphibious assault operations.

- 4. Conduct Security and Stability Operations (SASO). 12
- 5. Conduct Foreign Military Training, to include Foreign Internal Defense operations.
- 6. Conduct HA/DR operations.
- 7. Conduct Non-combatant Evacuation Operations (NEO).
- 8. Conduct TRAP in support of Joint Personnel Recovery.
- 9. Conduct Limited Expeditionary Airfield Operations.
- 10. Conduct Airfield Seizure Operations.
- 11. Conduct Joint/Combined Enabling Operations.
- 12. Develop Intelligence.

To this list we added three additional tasks [43, 44] which will be provided to the MEU by the Marine Special Operations company (MSOC) following the full development of the MARSOC.¹³

13. Direct Action, to include VBSS.

^{12.} SASO is described in Marine Corps Task List 1.6.6.9 in the following way: "a combined arms offensive operation. Combined arms is the full integration of arms in such a way that to counteract one, the enemy must become more vulnerable to another. SASO arms include: maneuver, intelligence, civil action, info ops, PSYOPS, engineering, supporting arms, aviation, humanitarian ops, etc. By combining unique arms as "weapons" on several clearly defined targets, this presents the enemy with a dilemma. In order to counteract the military IO campaign, the enemy must expose himself to the population, making himself vulnerable to CA projects. Patience and clarity is critical when applying SASO arms effectively to achieve mission victory." [41]

^{13.} As mentioned above, the Marine Corps has recently created a Special Operations Command as a component of USSOCOM. The Marine Special Operations company (MSOC) is the Marine SOC unit that will replace the Maritime Special Purpose Force (MSPF), which hitherto has given the MEU its (SOC) capability.

- 14. Special Reconnaissance.
- 15. Foreign Internal Defense without indigenous language capability.

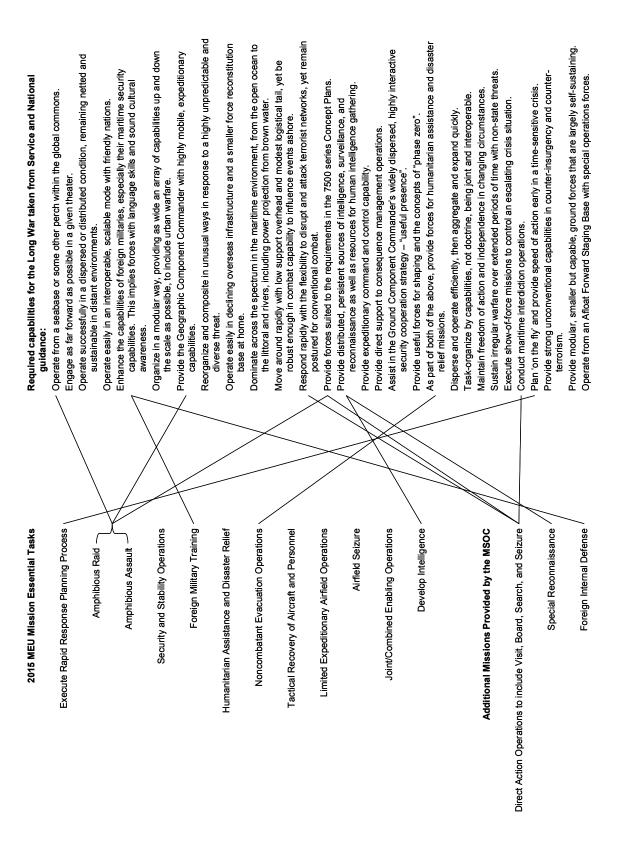
In figure 7 we compare the PP&O revised set of Mission Essential Tasks to the list of COCOM requirements, using the same method as in figure 6.

An examination of the relationships now shows only nine direct correlations between capability and requirement. The reason for a low correlation remains the same as in the previous exercise: the difference between the character of general capability requirements and that of specific mission taskings. This also explains why, again, a number of specific mission tasks do not cross to the more general requirements. The correlation is actually lower than in the previous example because in the revised set of METs the Marines in PP&O have eliminated several tasks from the original set of 23, such as urban operations and the amphibious demonstration.

MEU characteristics and core capabilities

In an effort to achieve a more reliable correlation between requirements and MEU capabilities, we expanded the comparison data base. When we interviewed current MEU commanders and staff officers, and when we examined the Marine Corps' MEU Pre-deployment Training Program (PTP), as well as after-action and situation reports from actual MEU deployments, we determined that the capabilities of the MEU exceed those reflected in the sets of Mission Essential Task descriptors [37, 45, 46]. A more compatible data base for comparing capabilities with requirements appears to be reflected in the MEU (SOC) Characteristics and Core Capabilities published in MCO 3120.9B and discussed above. In that source, the MEU is described in terms similar to those used to describe the COCOM requirements; thus, a direct comparison is more reliable.

Figure 7. Comparison of proposed MEU specific mission essential tasks with identified requirements



In figure 8, we make the same comparison as in the previous two examples, listing the COCOM requirements down the right side of the chart and the characteristics and core capabilities from the MCO on the left side. In this instance, the comparison reveals a rich correlation between the characteristics and core capabilities of the MEU and the requirements of the Combatant Commander. Of the 29 individual requirements in the set, all but six have some direct correlation to the capabilities of the MEU. This is a logical outcome now that the two data bases are compatible in construction. What the comparison tells us up front is that the MEU capability set is essentially consistent with COCOM requirements. In an effort to better understand the implications of the comparison for the gap analysis, we looked more closely at the data presented in figures 6-8.

As shown in figure 8, there are six COCOM required capabilities that do not match directly to MEU (SOC) characteristics and core capabilities.

- 1. Operate successfully in a dispersed or distributed condition, remaining netted and sustainable in distant environments.
- 2. Enhance the capabilities of foreign militaries, especially their maritime security capabilities. This implies forces with language skills and sound cultural awareness.
- 3. Provide distributed, persistent sources of intelligence, surveillance, and reconnaissance as well as resources for human intelligence gathering.
- 4. Disperse and operate efficiently, then aggregate and expand quickly.
- 5. Sustain irregular warfare over extended periods of time with non-state threats.
- 6. Operate from an Afloat Forward Staging Base (AFOB) with SOF forces.

Comparison of proposed MEU characteristics and capabilities with identified requirements Figure 8.

Reorganize and composite in unusual ways in response to a highly unpredictable and Respond rapidly with the flexibility to disrupt and attack terrorist networks, yet remain As part of both of the above, provide forces for humanitarian assistance and disaster Dominate across the spectrum in the maritime environment, from the open ocean to Operate easily in declining overseas infrastructure and a smaller force reconstitution Provide modular, smaller but capable, ground forces that are largely self-sustaining. Organize in a modular way, providing as wide an array of capabilities up and down Assist in the Ground Component Commander's widely dispersed, highly interactive Provide the Geographic Component Commander with highly mobile, expeditionary Operate successfully in a dispersed or distributed condition, remaining netted and Move around rapidly with low support overhead and modest logistical tail, yet be Enhance the capabilities of foreign militaries, especially their maritime security Sustain irregular warfare over extended periods of time with non-state threats. Provide strong unconventional capabilities in counter-insurgency and counter-Required capabilities for the Long War taken from Service and National Operate from an Afloat Forward Staging Base with special operations forces. Provide forces suited to the requirements in the 7500 series Concept Plans. capabilities. This implies forces with language skills and sound cultural reconnaissance as well as resources for human intelligence gathering. Plan on the fly and provide speed of action early in a time-sensitive crisis. Maintain freedom of action and independence in changing circumstances. Operate from a seabase or some other perch within the global commons. Task-organize by capabilities, not doctrine, being joint and interoperable. Execute show-of-force missions to control an escalating crisis situation. Provide distributed, persistent sources of intelligence, surveillance, and Operate easily in an interoperable, scalable mode with friendly nations. the littoral and rivers, including power projection from brown water. Disperse and operate efficiently, then aggregate and expand quickly. Provide useful forces for shaping and the concepts of "phase zero". robust enough in combat capability to influence events ashore Provide direct support to consequence management operations. Provide expeditionary command and control capability. security cooperation strategy – "useful presence" Engage as far forward as possible in a given theater the scale as possible, to include urban warfare. Conduct maritime interdiction operations. sustainable in distant environments postured for conventional combat. base at home. relief missions. diverse threat. awareness. capabilities Because it is forward deployed on combat loaded ships the MEU is flexible first response for the Combatant Commander in a crisis A positive signal of U.S. commitment to the region, a visible deterrent to anti-U.S. threats Available for shaping and TSC duties while forward for crisis response capable of rapid response to a variety of situations Can plan and begin operations within six hours of receiving a mission Able to secure critical staging areas ashore in advance of a larger force from the outset, while preparing for larger, joint and combined forces The force itself is task organized from a variety of combat and combat Also capable of selected maritime special operations Can easily transition between different operational environments Being seabased gives the MEU its own operational mobility, inherent force Sea-basing allows independent operations free from established ports or Deployed ashore the MEU is capable of combat operations which are Because of its training and unique task-organization the MEU provides a support units making it suitable for a number of different missions Useful in the range from humanitarian relief operations and security conventional combat operations ashore airfields and not subject to basing agreements Can remain on station, over the horizon, without revealing intentions The MEU is essentially an amphibious force, ideally employed from its shipping and sustained thereby once ashore. MCO 3120.9B makes limited in scope and duration. variety of maritime special operations including selected direct action Also because of its task-organization and robust combat service support The MEU is ideally structured to provide supporting operations to other, Joint/Combined, or differently engaged forces, to include enabling the cooperation engagement to limited amphibious assault and protection, and a degree of logistic self-sufficiency Politically unencumbered access around the world Ability to withdraw back to the ships in a hurry at the conclusion of an operation **MEU Core Capabilities** missions. MEU Characteristics The MEU provides forward presence in a force embodying operational flexibility Continuous presence, non-provocative but credible, an unobtrusive and The MEU contains organic C2 capability to control a developing situation clear that a core capability of the MEU is landing on a hostile shore. attachments the MEU can provide a range of military operations other introduction of follow-on forces.

One of these six non-matching requirements — providing distributed, persistent sources of ISR — matched well on the previous two tables, using the original set of 23 METs and the PP&O draft of the 2015 MEU METs. We need to look more closely at this requirement, because we know from experience that the MEU has an intelligence capability. A second non-matching requirement from figure 8 — enhancing the capabilities of foreign militaries — did not match in figure 6, but showed a positive correlation in figure 7. This is because foreign military training (FMT) was not reflected in the original 23 METs, but it was added as a MEU capability in the revised mission tasks for the 2015 MEU. We can thus consider this not to be a gap. The remaining four unmatched requirements — distributed operations, quick aggregation out of dispersal, extended irregular warfare, and SOF operation from an AFOB — have no clear matches in any of the comparison charts.

These four requirements then might be places to look for gaps in MEU capabilities for the changed international security environment as we prepare to engage in the long war against the global insurgency of militant Islam.

Matches and mismatches—a closer look

Before discussing potential changes to the MEU based on those apparent gaps, however, let's look more closely at each of the six apparent gap areas. In addition, there are two capability requirements which did correlate, but nonetheless need some clarification.

Distributed operations, netted and sustainable

We need to consider carefully the apparent mismatch in dispersed or distributed operations. We know from experience that the MEU frequently conducts what is commonly known as "split ARG" operations, when the ships of the amphibious squadron are in different places within an AOR, and conduct independent port visits and smaller exercises. There are also times when the ships of the ARG will be separated during visits to different ports, and the ship that is closer to a sudden crisis will steam alone toward the area in question. The MCO covering the MEU Pre-deployment Training Program cautions that the command element (CE) of the MEU should ensure depth in

certain critical skills against the likelihood of split ARG operations [37]. In October 2006, near the end of its transit to the CENTCOM AOR from California, the 15th MEU ended up with the three ships of its ARG in three separate locations. The LSD made an early inchop to the Gulf to offload the Marine company and the MEU tanks at Kuwaiti Naval Base (KNB). The LHD was in India for Exercise Mallibar, and the LPD was in the Maldives for a smaller exercise [47].

Interviews with MEU commanders and their staffs [45], as well as a close reading of after-action reports, reveals that these dispersed operations are, for the most part, not true, distributed offensive operations. Single ships detached for smaller exercises do not normally have the capacity for independent operations ashore. The ships by themselves lack sufficient support in most cases, and in the case of the LSD, there is not the required helicopter lift. Most split ARG operations appear to support exercises, port visits, or limited security cooperations activities.

There are exceptions, as in the case of the *Iwo Jima* ARG during NEO operations in Beirut, Lebanon in July 2006. During that operation, the *USS Nashville*, LPD-13, was used independently as a support platform and staging base for a reaction force. This was possible because of the LPD's helicopter deck, and the fact that medium-lift CH-46s could be temporarily supported away from the big deck platform [48]. During that same operation a detachment of CH-53E helicopters departed *USS Iwo Jima* in Aqaba, Jordan and flew across the Sinai to the island of Cyprus in the eastern Mediterranean for staging MEU advanced force elements. During the time the ships of the ARG were clearing Jordan and steaming through the canal toward Lebanon, the detached helicopters with the forward elements, security detachment, and maintenance elements, were conducting truly distributed operations. These instances are rare, however.

In this same vein, we noted that one of the six apparent gap areas was in fact the reverse of the distributed operations requirement — the need to aggregate quickly out of a dispersed condition for a larger operation. This is, in fact, something the MEU can do, within the limits of the speed of the amphibious ships. During interviews, MEU commanders reported that, while they had elements of their

command dispersed to various locations in Iraq, they were tasked with the capability to assemble their MEU back aboard ARG shipping in Kuwait within 72 hours.

Enhance the capabilities of foreign militaries

In spite of the apparent positive match in figure 7, the requirement for forces that can enhance the capabilities of foreign militaries needs a second look. To date, training foreign militaries has not been a core capability of the MEU, and it is not on the original list of 23 METs in MCO 3120.9B. Foreign military training is on the shorter list of METs in the draft PP&O set of METs. The definition of FMT in Marine Corps Task 4.7.2.2 in MCO 3500.26 is as follows:

To provide adequate preparation, effective presentation, practice and rehearsal, thorough evaluation, and certification of the execution of unit (collective) and individual tasks. The instruction of personnel to enhance their capacity to perform specific military functions and tasks; the exercise of one or more military units conducted to enhance their combat readiness. Support to counterinsurgency includes support provided to a government in the military, paramilitary, political, economic, psychological, and civic actions it undertakes to defeat insurgency. Support to counterinsurgency operations often include security assistance programs such as foreign military sales, foreign military financing program, and international military education and training program. Such support also may include FID.

The first part of this definition is not a problem for the MEU, and in fact, interviews with current MEU commanders and their staffs indicate that the MEUs now do considerable informal training of foreign militaries during exercises, some of it at a fairly sophisticated level. ¹⁴ Training to the more formal task criteria cited in the early part of this definition would not be difficult for the MEU. However, the remainder of the definition transitions into counterinsurgency and support to paramilitary, political, economic, psychological, and civic action programs — things the MEU is not necessarily certified or staffed to

^{14.} As one example, in October 2006 the 24th MEU (SOC) had a military training team ashore in Iraq training the Iraqi Marines in installation security operations.

accomplish. This needs to be considered carefully if the MEU, as distinct from the Marine Special Operations company, is going to move into the FMT business in a formal, certified way. The last sentence in the task description above adds Foreign Internal Defense (FID) to the set of capabilities included in FMT, and raises another flag of caution.

The most recent CMC bulletin on USMC support to MARSOC lists FID as a mission of the Marine Special Operations company [49]. FID is a larger, more complex, and more demanding mission than FMT, involving a joint military effort as one part of the application of all instruments of U.S. national power to support host nation efforts to combat subversion, lawlessness, and insurgency [50]. The primary emphasis of FID operations is on building viable institutions that respond to the needs of the particular society. This task is far too big to be accomplished by the military alone, and certainly cannot be done by the MEU acting independently. The societal needs in question are primarily economic, social, informational, and political, not military. U.S. combat operations in these cases are intended to be in support of the larger political, economic, and social efforts, are always defensive in nature, and are intended to help the host nation achieve self-sufficiency. This is a large and open-ended mission set for the MEU, let alone for the smaller Marine Special Operations company, and the Marine Corps needs to approach it with caution.

Under enhancing the capabilities of foreign militaries, the COCOM requirement stresses the need for forces with language skills and cultural awareness. The Marine Corps has recognized this need for some time now and has programs in place to improve in both areas [27]. ¹⁵

^{15.} The need for more language training is recognized across the Department of Defense. The 2006 QDR states, "Developing broader linguistic capability and cultural understanding is also critical to prevail in the long war and to meet 21st century challenges. The Department must dramatically increase the number of personnel proficient in key languages... and make these languages available at all levels of action and decision — from the strategic to the tactical."

Distributed, persistent sources of ISR

As the COCOM's principal emphasis shifts from conventional combat to distributed, low-intensity counterinsurgency, the importance of intelligence to successful operations increases. As shown by the correlation data in our three tables, the requirement to provide sources of ISR is well-matched by specific mission taskings within the capabilities of the MEU. The S-2 section of the MEU command element and the intelligence sections of the MEU's subordinate elements are well equipped and trained to gather, process, and interpret information from a variety of sources, including human intelligence (HUMINT) sources. It should be borne in mind, however, that the ISR capabilities of the MEU are primarily designed to support the MEU itself, and are not capable of supporting the COCOM in general across the wider theater. Another drawback of the MEU's ISR capability is its depth. The assets of the MEU for intelligence gathering and exploitation are significant; however, the resources in terms of people with the necessary specialties are limited, making simultaneous operations in more than one area of the AOR difficult.

Sustaining irregular warfare over extended periods of time

The requirement for protracted engagement in irregular warfare does not correlate directly with any of the MEU characteristics or core capabilities cited in the MCO. The MEU is structured for rapid-reaction — characterized by the flexibility of amphibious basing, quick raids, and timely security operations — not extended counterinsurgency operations ashore [51]. ¹⁶ Note that the extended irregular warfare requirement is directly related to three other COCOM requirements in the data base: rapid attack of terrorist networks,

^{16.} We say this with the understanding that the MEUs have been employed extensively ashore during OEF/OIF, beginning with the 15th MEU(SOC) in Afghanistan in December 2001 and continuing at various levels and for various lengths of time in both Afghanistan and Iraq since then. As noted in the introduction, the use of the MEUs ashore in OIF/OEF is considered something of an anomaly and a departure from their normal role as afloat forward expeditionary rapid-reaction forces. For details on the trends in MEU employment in the Arabian Gulf during OIF/OEF, see [51].

forces suited to the 7500 series Concept Plans, and counterinsurgency/counter-terrorism capabilities. These three requirements do have direct correlations to MEU capabilities because of the Maritime Special Purpose Force and the ability of the MEU to accomplish selected maritime special operations in its (SOC) role. This capability is enhanced by the MEU's rapid planning and response capabilities. The issue here is not the MEU's capability for direct action against insurgent or terrorist elements. Rather it is whether extended, long-well operations are appropriate for the amphibiously based MEU in a counterinsurgency mode.

The MEU's inherent match with low-intensity conflict and irregular operations is almost a cliche: it is self-contained, from the sea, equipped with its own transportation, supporting arms, and internal intelligence assets, and largely self-sustained logistically; thus, it appears to be the ideal force for the widespread small unit engagements central to counterinsurgency. On the other hand, the MEU is not designed to stay in one place very long.

The idea that the MEU is not designed for geographically fixed operations is central to the identity of the MEU, which is by definition a flexible, unpredictable force, suited for rapid insertion and equally rapid withdrawal after a raid or direct action mission. While these capabilities have direct application to some aspects of irregular warfare, and particularly to counter-terrorist direct action operations, they are not necessarily well suited to long-dwell, extended counterinsurgency operations. One of the essential aspects in fighting an insurgency is the relationship with the local people: understanding them, being there to protect them from the insurgent, and over time achieving their trust. For this aspect of fighting the entrenched insurgent, it seems essential for forces to be fixed on the ground for an extended period. The key element for success is getting to know the people, their circumstances, and their security needs, and learning how to win their confidence. Without their trust, it is difficult to separate the insurgent from his local support network, or to get the locals

^{17.} This capability is not expected to be diminished by the transition from the MSPF to the Marine Special Operations Company.

to surrender the vital information needed to fight the insurgent — the ground-based intelligence that is the basis of a successful campaign against an indigenous insurgency [52].¹⁸

The MEU is a forward-deployed rotational force that must contend with long transit and has little dwell time once it reaches an operating area. These characteristics may have an effect on the viability of the MEU as a primary instrument against the globally netted insurgency threat.

Operations from an AFSB with SOF forces

SOF operations from an Afloat Forward Staging Base (AFSB) is an important capability for the Combatant Commander, and it is not something the MEU trains to as an advertised capability. At the same time, understanding that the ships of the ARG constitute a seabase, and understanding that the current Maritime Special Purpose Force, as well as tomorrow's Marine Special Operations company, are well trained and equipped to project force from that seabase, we consider this requirement to be met as an included aspect of the overall MEU (SOC) amphibious capability set.

Maritime dominance, including the littorals and rivers

Dominating across the spectrum in the maritime environment will be vital to the Combatant Commander in his future engagements with the global Islamic insurgency and transnational extremism [2]. In that requirement is the need to operate within and from the so-called "brown water" environment, by which is meant the inshore and riverine areas. Although that particular COCOM requirement correlated

^{18.} The element of time and of understanding the population in which the insurgency operates is a recurring theme in John A. Nagl's comparisons of the British experience in Malaya in the early 1950s and the American experience in Vietnam a decade and a half later. The following quote is illustrative: "The indirect approach of defeating an insurgency by focusing on dividing the people from the insurgents, removing the support that they require to challenge the government effectively, is rather different from the direct approach and in the long term is usually more effective. Winning that support is the critical battle in a counterinsurgency campaign." [52]

well with the MEU's amphibious character and task-organized maritime special operations capability, it is worth noting that the MEU does not currently have a riverine capability per se. The Marine Corps transits the littorals well through its amphibious capabilities, but it is no longer equipped to operate from within the "brown water" areas. In fact, the Marine Corps is in the process of training Navy riverine squadrons and passing its riverine combat responsibilities to the Navy [53]. This technically constitutes a gap in the MEU's capability to fill a COCOM requirement; however, it is not one that the COCOM will expect the Marine Corps to fill in the future.

Consequence management operations

With regard to Consequence Management (CM) operations, this is an area where the MEU is well suited for performing in a supporting role. The MEU has materiel, equipment, limited medical support facilities, and most importantly the command and control apparatus to function as a first responder and an enabler for follow-on forces and agencies. The MEU is not equipped to function as the command element of a joint task force responsible for a full-blown CM mission [48].¹⁹

Before leaving the subject of the gap analysis, we should mention the small set of MEU capabilities in figure 8 that did not have obvious correlations with COCOM requirements. There were five of these characteristics and core capabilities;

- Securing staging areas ashore in advance of a larger, arriving force.
- Transitioning easily between different operational environments.

^{19.} During the July 2006 Beirut NEO, the Commander 24th MEU (SOC) noted widespread misunderstanding of the MEU's capability to help with humanitarian assistance (HA) for displaced persons in the greater Beirut area. As the MEU after-action report makes clear, "The actual strength of a MEU (SOC) is as a first responder to facilitate the introduction of NGO's/PVO's into the disaster area for long term HA support." [48]

- Remaining on station, over the horizon.
- Withdrawing quickly to ARG shipping after an operation.
- Supporting other engaged forces and enabling follow-on forces.

Three of these "excess capabilities" are attributes derived from the amphibious nature of the MEU. These are: the ability to transition easily between maritime, littoral, and inland environments; over the horizon flexibility; and the option of return to the security of seabased shipping. Thus, these are not so much redundant capabilities as things inherent in amphibious expeditionary forces, and very much in the COCOM's demand set for the future. Similarly, the other two capabilities on this list; holding advanced staging areas, and supporting larger follow-on forces, are inherent abilities of on-thespot, forward-positioned forces. The fact that they do not show up in the set of COCOM demand signals, does not mean they are capabilities that can necessarily be de-emphasized. The combat capability, organic lift, and self-sustainability of the MEU, provide a capability to hold advanced staging areas. As the strategy of maintaining flexible and distributed, irregular warfare forces forward, while keeping heavier, more conventional capabilities in the rear, is further refined in the future, this capability of the MEU will be increasingly valuable.

Recap: MEU capabilities in need of improvement

The above analysis of the capability-requirements comparison tables, coupled with the description of how the Combatant Commander develops his requirement, tells us several things. In the future, it will be essential to the COCOM to have ready access to forward-deployed expeditionary forces equipped and trained for counterinsurgency and counter-terrorism operations. It is important that those forces have the ability to dissaggregate readily, operating simultaneously in a distributed mode across wide areas of a forward theater. The most prevalent form of conflict in the future will be low-intensity operations against a dispersed enemy equipped with a variety of asymmetric means. Distributed and persistent sources of intelligence will be essential to the success of these operations. Conversely in this future,

the requirement for U.S. involvement in traditional state-vs.-state conventional conflict is expected to be rare.

As currently structured, trained, and equipped, the forward-deployed Marine expeditionary unit will be well suited to the needs of the Combatant Commander in the low-intensity, counterinsurgency environment of the future, particularly when augmented by an element of MARSOC. The foregoing analysis nevertheless reveals some areas the Marine Corps might examine as possible weaknesses in the MEU for playing a central role in the long war against the widely dispersed global insurgency of militant Islam. Primary among these are:

- 1. The ability to disperse and conduct effective distributed operations from the sea
- 2. The capacity for sustained irregular warfare (counterinsurgency) over extended periods of time
- 3. Sufficient depth in intelligence collection capability to provide the COCOM with distributed and persistent ISR collection.

Potential approaches for addressing the gaps

With these areas of possible improvement in mind, and considering the future security environment as described in the section on Requirements, what are some possible approaches for change? Are there changes that might better position the MEU to meet the challenges of that future and continue providing the Combatant Commander with the most useful forces for the changing international security situation? Furthermore, where there are areas for improvement, do they lie in the MEU's organizational construct or in the force generation model, that is, the composition of the ARG and its pattern of deployment?

Addressing the force generation model

We began our assessment of the "gaps" by considering the requirement to "operate successfully in a dispersed or distributed condition, remaining netted and sustainable in distant environments." The Islamic insurgent enemy of the future is active across many countries and has to be countered quickly when intelligence produces actionable but fleeting targets. Given the dispersed and elusive nature of the threat, the COCOM needs as much coverage as he can get with forces that can be offensive simultaneously in more than one place. This means that ideally the individual pieces of the MEU would be capable of independent, meaningful, offensive operations in an intelligence-driven environment.

Importantly, more coverage also increases the amount of TSC that can be accomplished — that is, the number of partner nations engaged across a wide AOR for capability enhancement and partnership development. Also, as previously discussed, the MEU is not present very long, especially in the Central Command. Even in the Pacific, much of the deployment is spent just moving around the AOR touching various important places and covering potential

trouble spots. All of this argues for the MEU to be in more than one place at the same time.

The key piece of logic is: it is not the construct of the MEU itself that prevents simultaneous operations in more than one separated place. In operations in Iraq over the past three years the MEU has shown itself capable of conducting meaningful operations in several places simultaneously once it has been off-loaded into Kuwait [54]. Limited distributed combat operations are possible now, and it would be possible to redesign the MEU into individual task forces with some additions and some movements internal to the BLT and the composite helicopter squadron. That would not, however, solve the problem.

The difficulty is the lift. It would not work for the ARG to drop off smaller increments of the MEU at various locations in a theater while continuing on to other contingency areas or moving to take advantage of some timely piece of intelligence. The beached MEU segment would be adrift without support from its seabase and no immediate way to be either reinforced or withdrawn should the situation deteriorate.

The logical answer is more amphibious lift. This solution yields two important needs, the ability to more widely disperse the platforms that carry the Marines, and the ability to embark more capability on the smaller, dispersed entities. Having reached the logical conclusion that the essential answer to a more distributed MEU is more lift, what can we suggest for the existing ARG/MEU that fills the bill?

A Four-ship amphibious ready group (ARG)

The ability to conduct true distributed operations from the sea would be enhanced by a bigger amphibious ready group. Before we develop that idea, what about today's frequent "split-ARG" operations? As was mentioned above in the analysis of the capability/requirement tables, the ARG that carries the MEU today frequently operates in a dispersed mode, with the three ships in different places. It seems clear from discussions with MEU commanders and their staffs and from a review of MEU operations — both since 11 September 2001 and over a longer period going back to 1990 — that "split ARG" operations are for the most part not truly distributed operations [33, 51].

As discussed in the section on Requirements, the objective in distributed operations is to use the increased combat capabilities now resident at the small-unit level to allow deliberately separated but coordinated and interdependent combat actions as a form of maneuver warfare against an adaptive and decentralized enemy [55]. An ARG/MEU optimized for distributed modes of operation would simply carry these smaller units to the area of operations (AO) in single ships or in sections of two ships split off from the larger ARG. These ARG increments would function as small seabases for the direct action/raid/interdiction units ashore. Two essential attributes would be helicopter lift and ground mobility ashore.

The need for offensive operations against a dispersed enemy, along with increasingly important security cooperation activities and exercises in different areas within an AOR, argue for splitting the ARG into smaller groups. Ideally, each independent grouping would be capable of independent raid-like or direct action operations ashore. That way they could take better advantage of fleeting targets and timely intelligence developed against an enemy that is by definition elusive and distributed across wide areas of a given theater.

The three ships of the current ARG do not have sufficient capability to allow a three-way split of the MEU combat capability in such a way as to support independent raids or direct action operations. The LSD by itself does not provide helicopter lift (it has one or two spots, depending on the class, but no CH-46 equivalency). The LSD does carry landing craft, including a mix of the LCAC and the LCU depending on the class, and all classes carry at least a company of Marines. The normal split-ARG configuration is the big deck (LHA or LHD) with the LSD, and the LPD by itself. The LPD (both the LPD-4 class and its replacement, the LPD-17) has two helicopter spots and accommodates the equivalent of four CH-46s [56]. As mentioned in the previous section, during the July 2006 Beirut NEO by the 24th MEU (SOC), USS Nashville, LPD-13 served as a platform for contingency response capability while USS Iwo Jima, LHD-7, was temporarily unavailable for maintenance. Three CH-46Es and two AH-1Ws were cross-decked to Nashville, and the embarked Marines were configured for TRAP missions and as a Quick-Reaction Force (QRF) [57].

Such a split raises the obvious complication of single-ship defendability. Even splitting the three-ship ARG into two groups requires one ship to be by itself. If we define an expeditionary strike group (ESG) as including three surface combatants and one SSN, a single amphibious ship split out from the group has little in the way of escort. Of equal importance, the capability of the LSD by itself argues against such a split. This works when the mission is a smaller exercise in a benign environment, or a security cooperation mission such as foreign military training, or perhaps a small humanitarian relief operation. Interviews with MEU commanders indicate that for raids, TRAP, or any of a variety of direct action missions the use of the LSD alone is a more risky proposition.

A better configuration would be to add one LPD to the ARG, making it a four-ship group, and reconfigure the MEU with the intention of operating in two task organized units whenever conditions and the threat warrant. This would solve the problem of space, which is severely constrained for today's MEU in the constriction of three ships. 20 It would allow the split of the ARG into one section composed of the big deck and the LSD, and another section of two LPDs. If one of the LPDs were flag configured, it would provide the added C2 capabilities of a supporting arms coordination center (SACC) and a helicopter coordination section, adding to the C2 capabilities of the section without the big deck. The additional LPD would also allow a three-way split, with the two LPDs operating independently. This would require significant MEU augmentation and rearrangement, especially in C2, intelligence, and aircraft maintenance. It would also require careful planning and attention to the threat, since a three-way split of the ARG would make significant demands on the surface escorts of the ESG.

In a two-section-split ARG (the big deck plus the LSD, and the two LPDs together), the deck configurations of the LPD section would allow a robust helicopter lift and armed escort capability. There would be sufficient troop space for an even split of the BLT if that

^{20.} All MEU commanders interviewed for this study reported having to make decisions about what to leave behind in their embarkation plan due to limited space aboard the three-ship ARG.

were desirable, as well as the capability to put the MSOC with either group, or to split the SOC assets into two independent task forces so that both ARG sections would have a maritime special purpose capability. The table of organization (T/O) of the MSOC appears to facilitate such a split. An issue is the difficulty of splitting the ACE into more than two pieces due to the depth of maintenance specialties. Even a two-section split can severely tax the ACE in maintenance capability. In the 24th MEU's Beirut NEO in July 2006, the CH-53E detachment was split to support initial operations out of the ISB in Cyprus while the LHD was still in the Red Sea. Lack of critical maintenance support prevented 24-hour flight operations out of Akrotiri until the big deck arrived [57].

Before we leave the subject of adding an amphibious ship to the current amphibious ready group, we should look briefly at the numbers of L-class ships and see whether we can estimate how feasible such a course of action would be for the Navy fleets.

CNA recently did a study for the Marine Corps, examining the implications for the Marine Corps of establishing a Fleet Response Plan (FRP) for the amphibious forces. An FRP had been developed for the carrier fleet, designed to significantly increase the rate at which the Navy can deploy forces [58]. The CNA study examined the ability and capacity of the amphibious forces to surge should the Navy and Marine Corps adopt an Amphibious Fleet Response Plan (AFRP).

Assumptions for the study were that ships deployed with the ARG at any given time were not available as surge candidates, and all surge ships would deploy in the same risk category in terms of training and workups as normal deployers. Projected out to the year 2025, and using Navy ship annual inventory totals of 9-10 for the LPD and 12 for the LSD, the surge study showed a conservative surge potential of between three and five of these "small deck" amphibious ships at any given time. This data is by no means conclusive evidence that the Navy could afford to increase the standard ARG to four ships, but it does show that pursuing that option does not appear fanciful in terms of ship availability.

We should point out that ship numbers, in and of themselves, do not tell the whole story. The Navy maintains strict parameters for the normal turn-around of all ships in the fleet, mandating certain numbers of months in port and in local training between deployments. Research has been done at CNA in the past which suggests that, numbers of ships notwithstanding, there are turn-around ratio (TAR) restrictions that might make it difficult to add a small-deck amphibious ship, either an LPD or an LSD, to the standard ARG. These issues will need to be researched in detail if there were interest in pursuing this option; it is beyond the parameters of this study.

Shifting to a nine-month deployment schedule

The length of the MEU's deployment has been mentioned as a limiting factor in the capacity of the MEU for sustained counterinsurgency operations against radical Islamic and other terrorist threats. The length of deployment also affects coverage within an AOR, due to transit times. For operations in the Central Command AOR the average ARG spends nearly half of its six-month deployment in transit to and from the operating area. Shifting to a nine-month deployment schedule would significantly increase the amount of time the MEU has to operate within a theater once it arrives.

Changes within the MEU itself

As shown in the previous section, improving the MEU's capability for distributed operations from the sea is an issue logically addressed in the force generation model for the larger amphibious task force, the ESG and the PHIBRON in which the MEU is embarked. A bigger ARG and more distributed offensive and TSC operations would call for adjustments to the MEU, but fundamental change is probably not required. On the other hand, improving the MEU's capability for sustained irregular warfare and counterinsurgency operations might require substantive changes to the organizational construct of the MEU itself. One way of improving the MEU as a counterinsurgency tool is to accentuate the platforms, systems, and equipment that will be most useful in the long war.

Implications for the Command Element of the MEU

Before we turn to major changes in the MEU for the long war, let us look at the implications for MEU structure that are inherent in the recommendation to expand the ARG for distributed operations. Any move to increase the ships of the amphibious squadron embarking the MEU with a commensurate increase in distributed operations on the part of the MEU should be accompanied by a detailed look at the C2 capability of the MEU command element. The command element itself consists of the MEU commander and staff, approximately 20 officers, and an enlisted complement of no more than 50 Marines. The CE is augmented by detachments from both the radio battalion and the intelligence battalion.

The CE is organized to enable the detachment of a forward command element, which customarily goes forward in a NEO operation to set up the evacuation control center, normally at the U.S. embassy. This confirms the CE's ability to function in two separate locations; however, a NEO is a discrete operation and doesn't require managing separate maneuver elements, as true distributed operations do. The MEU is not normally structured and equipped to manage multiple maneuver elements simultaneously, especially from more than one location at once — something it could well be called upon to do. 21 A COCOM requirement is to flow additional forces into a theater in a hurry, falling in on an established structure that enables immediate employment. This could involve not only U.S. joint forces from a CONUS surge, but coalition and partner nations providing forces already forward in an area. Moreover, the MEU command element appears to lack the capability to function readily as the core of a joint task force for the COCOM. The MEU is not staffed for the coordination of joint fire support or the control of joint forces. Currently the ESG command element functions in this role; however, there are likely to be instances when a backup capability would be useful to the geographic commander.

^{21.} In interviews, MEU commanders indicated that the MEU CE lacks sufficient depth in critical specialties to operate in the manner of a regimental command element, which is structured in anticipation of managing three maneuver battalions.

Persistent ISR and intelligence assets for counterinsurgency

There are two issues here: the use of the MEU as an intelligence source for the COCOM's theater needs, and the ability of the MEU S2 section to support distributed operations. A significant requirement of the theater commanders in the long war will be more and more timely intelligence. An identified gap in COCOM requirements is for persistent sources of ISR at the theater level. The wide distribution of the threat, the limited time available to develop targets, and the reduced time to translate intelligence into offensive action all demand better and more continuous surveillance, as well as access to reliable products of that reconnaissance. The MEU's intelligence capabilities, to include counter-intelligence and HUMINT, are tailored to support the MEU itself in a limited area of operations and influence.

The MEU is actually well equipped with intelligence assets for its own low-intensity, counterinsurgency operations. A principal MET on all the available MEU lists is some form of "develop intelligence," and intelligence gathering, interpretation, synthesis, and analysis is an area in which the MEU excels. The issue is the depth of that capability in the MEU and how easily the functions of intelligence could be split to support distributed operations. This is another area for the Marine Corps to examine in light of more distributed operations in the future.

A MEU for the long war

A principal conclusion from the research done for this study is that the forward-deployed expeditionary forces of the United States need to be optimized for the long war. We have discussed the MEU's theater dwell time as one possible impediment to more effective counterinsurgency efforts, which is one reason for recommending extending the deployment time.²² Even at nine months, however, a three-month extension is not likely to solve this dilemma.

In a similar vein, a repeated theme in the background research for deriving the requirement was the need to accept some degree of risk in conventional military capability in order to accentuate our preparedness for the low-intensity, distributed, counterinsurgency operations that will characterize conflicts of the future for U.S. forces [6].²³ This would suggest a future emphasis on forces with less sophisticated war-fighting capability but with more intelligence-gathering and interpretation capability, to include signals and human intelligence. It would argue for emphasizing the ability to operate in distributed packages against a dispersed and illusive enemy [59]. This points to more helicopter lift, clandestine entry from the sea, small raid, and other direct action capabilities.

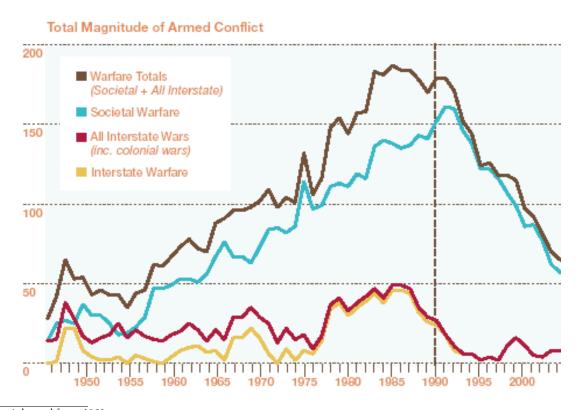
A shift in MEU priorities would enable a better focus on low-intensity conflict and the long war. Such a shift would be logical since forward-deployed expeditionary forces are employed first in conventional situations as lighter, more rapid responders to crisis or as stabilizers in escalating tensions. Heavy forces and forces for protracted engagement are better deployed from main operating bases, primarily in CONUS but also in some forward areas. Given the importance of shaping and security cooperation to the COCOM now and in the future, it also makes sense to accentuate humanitarian relief supplies, engineering, and disaster response capabilities.

^{22.} In addition to longer dwell time for counterinsurgency operations, a primary benefit of a longer deployment is that it would alleviate the problems with turn-around time, and thus make a larger ARG more feasible.

^{23.} As just one example, the *National Defense Strategy* states: "Our experience in the war on terrorism points to the need to reorient our military capabilities to contend with (such) irregular challenges more effectively."

The requirement for high-end combat is not likely to fall to immediately available, forward-deployed expeditionary forces in the future. In fact, there is evidence to indicate that the prevalence of state-vs.-state conflict is in a period of sharp decline and, with it, the need for heavy conventional forces forward as stop-gaps and quick-response options for controlling such crises. Figure 9 shows the decline in the levels of global armed conflict since those levels peaked in the mid to late 1980s near the end of the Cold War.

Figure 9. Global trends in violent conflict^a



a. Adapted from [60].

This graph displaying the magnitude of global armed conflict is taken from *Peace and Conflict 2005: a Global Survey of Armed Conflicts, Self-Determination Movements, and Democracy*, published by the Center for International Development and Conflict Management (CIDCM) in May 2005 [60]. The chart makes it clear that even at the height of global

conflict most wars were intra-societal, not inter-state.²⁴ There are several reasons for this trend, among them improvements in the collective security system of the United Nations and the removal of Soviet disruptive influence during the Cold War. The point for our analysis of the MEU is that we have less need for heavy forces now in terms of deterring or responding to aggressive inter-state behavior. It is particularly true that we have less need to position our heavy forces forward in anticipation of immediate response to such behavior.

In its MEU (SOC), the Marine Corps has created a unique blend of fairly sophisticated conventional combat capability and special purpose maritime forces suited for rapid insertion raids and a variety of direct action missions. The basic combat unit of the MEU is the BLT. The higher-end conventional combat capability is provided primarily by four M1A1 main battle tanks and six M-198 155mm towed artillery pieces in the ground combat element of the MEU, and by the AV-8B fixed-wing attack jets in the air combat element. There is no question that these weapon systems add a significant dimension of lethality and extended reach to the firepower of the MEU.

With a range of 19 km, the M-198 howitzer can range well beyond the normal defensive perimeter of a BLT that is committed to a security mission such as the defense of an airfield or port. The M1A1 main battle tank provides an impressive dimension of shock and direct fire; it is today's most survivable armored vehicle, superior to any other tank on the battlefield. The tank is also well suited for combat in built up or urban environments. Similarly, the AV-8B provides the BLT with its own organic close air support, on call and available rapidly from the amphibious squadron's nearby seabase. In those instances when the MEU has been assigned to extended operations ashore, the AV-8B has proven itself capable of operating from a fixed base ashore, where its responsiveness is equal to that provided from the ship. ²⁵

^{24.} Intra-societal conflict includes ethnic strife, factional fighting, civil wars and insurgencies or separatist terrorist actions against the state.

^{25.} We should also mention that in all of the interviews we conducted with the MEU staffs, a recurring theme was the usefulness of the Harrier's Lightning pod as an ISR resource for the MEU.

At the same time, if a primary objective is to become better suited for low-intensity, distributed, counterinsurgency operations against a widely dispersed enemy using asymmetric means and operating from the cover of an indigenous population, perhaps lightening the MEU by removing these cumbersome conventional capabilities is worth considering. It is not the purpose of this report to enter the debate about tanks and artillery within the MEU, an issue that has filled many pages of the *Marine Corps Gazette* in the past several years. We will, however, provide the following brief summary, which presents points that may be worth considering:

- Both tanks and artillery make significant demands on the limited available embarkation footprint. This problem will only get worse with the coming of the MSOC and the replacement of the CH-46 by the MV-22. The problem of space would be relieved to an extent by moving to a four-ship ARG, but crowding will remain an issue.
- Space freed up by removing tanks and artillery could be profitably used by adding ground mobility, combat engineers, and disaster relief equipment and supplies. In particular, removing four M1A1 tanks would make room for as many as six light armored vehicles (LAV-25), six additional HMMWVs, and two additional 5-ton trucks [61]. Ground mobility and the flexibility of the LAV for irregular warfare may outweigh the "shock and awe" factor of the tank.
- Both tanks and artillery are cumbersome to move ashore and take up assets that could be used to move more versatile systems such as the LAV-25.
- In terms of substitute systems more applicable to distributed, low-intensity conflict, the space freed up by removing the fixed-wing aviation would allow additional medium lift and armed helicopters. Once the MV-22 replaces the CH-46, there will be a hunt for space on the big deck, given the larger footprint of the Osprey compared to that of the CH-46.

• The logistics train for all of these systems is large, particularly in terms of fuel for the tank, and in prime movers and ammunition for artillery.

A more fundamental issue may be that these systems — the M1A1 tank, the 155mm artillery piece, and the AV-8B — are less compatible for the kind of combat that is almost certain to characterize the long war, especially the short-notice, rapid-reaction engagements that should be the forte of the MEU (SOC). Furthermore, if needed, these heavier systems can be brought forward from the rear or moved to the operating area on pre-positioned shipping. There are several long-running and on-going CNA studies of historic U.S. force employment that contain findings informing some of these issues concerning how much of the high-end conventional combat capability must be kept forward-deployed for immediate employment [33, 62, 63]. Some applicable findings;

- During the period 1990-2006 in the great majority of major operations that were at all time-sensitive the Marines' equipment, especially the heavy equipment, was delivered by maritime pre-positioned shipping (MPS).
- Most situations resulting in armed intervention by the United States had been percolating in a generally escalating circumstance for some years before the U.S. elected to respond. Warning times in these situations were such that forces employed could easily have been brought forward from CONUS.
- Even in the operations in Afghanistan that responded to the attacks of 11 Sep 2001, the MEU did not go ashore at Camp Rhino some six weeks after the bombing campaign began, which itself was almost a month after the terrorist attacks on the United States.

 \bullet NEOs and natural disasters are the key exceptions: neither of them normally requires high-end conventional combat capability. 26

An obvious option is to pre-position heavier and more logistics intensive weapons systems and equipment on MPS, with specific ships in the squadrons designated as MEU support or augmentation ships. For some time now, the Marine Corps has loaded two ships of each MPS squadron as MEU "slice" ships. These vessels are loaded with the gear and equipment necessary to support a fly-in MEU. That same gear and equipment could be designated to support an afloat MEU, with the roll-on roll-off ships prepared to meet the MEU at a suitable forward location for offload and transfer. Loads could be adjusted so the MEU could access certain systems immediately on arrival.

Similarly, the fixed-wing aviation assets could be tethered to the forward-deployed MEU but remain based in the rear, similar to the operational concept for the KC-130. Maintenance gear and equipment, as well as ordnance, could be pre-positioned on the MEU augmentation ships of the MPS squadron in the applicable AOR. The difficulty with this is twofold: the obvious delay in requesting an asset from CONUS; and the need to have prepared, temporary basing facilities close enough to the operating area of the MEU to be useful.

There are solutions for the basing issues in areas where the United States habitually operates and has forces stationed routinely, or where it has agreements in place for the temporary forward staging of assets for contingencies. American bases in the western Pacific and Europe are an example of the former. U.S. agreements for Cooperative

^{26.} In the July 2006 Beirut NEO, the 24th MEU had its AV-8Bs in an on-call orbit pattern out over the water whenever possible to cover the movement of the lift helicopters to and from the U.S. embassy. In the confusing jumble of urban Beirut in the immediate aftermath of Israeli airstrikes, any hostile fire directed at the MEU helicopters could probably have been much more successfully countered by an armed helicopter in direct escort with the transports than by a fixed wing orbiting at altitude and with no forward air controller on the ground.

Security Locations (CSL) in the Philippines, Thailand, Australia, and Singapore, are examples of the latter.

Another practical consideration is that there is scant room aboard the three ships of the currently configured amphibious ready group for the gear, equipment, weapons systems, supplies, and personnel of the MEU. Regardless of decisions made by the Navy regarding the MEU force generation model, decisions about lightening the MEU can be made by the Marine Corps unilaterally. MEU commanders deploying from both coasts now routinely make difficult decisions about what to leave on the pier. When the 24th MEU (SOC) recently deployed from the East Coast, it sailed with four vice the traditional six tubes of M-198 howitzers, having sent the remaining two guns forward to the CENTCOM operating area by Military Sealift Command (MSC) shipping. The same is true for the 15th MEU (SOC) when it deployed in September 2006 from San Diego, California. In discussions with MEU commanders at Camp Lejeune, North Carolina, a system frequently mentioned for leaving behind in the MEU packup is the MK-48 LVS (logistics vehicle system), the Marine Corps' heavy tactical vehicle system.

As mentioned above, the problem of space on ARG shipping is not going to get any better in the near future. The replacement of the Maritime Special Purpose Force (MSPF) by the Marine Special Operations company (MSOC) will require more Marines as well as considerably more square and cube space in additional equipment vans and vehicles. As also mentioned earlier, when the MV-22 enters the inventory and replaces the CH-46, it will require more space — not only on the flight deck, given the size difference, but also below decks in additional maintenance and technical support and an increased supply support package.

Perhaps as a summary of this section on lightening the MEU for the long war, we should reflect that ship technology and the innovative progress made in pre-positioning and seabasing have brought us to the point where we can stop thinking about the composition of the MEU as a "done deal" when it sails. We long ago became accustomed to thinking about the KC-130s as part of the MEU, even though they by no means deploy with the ARG shipping. If we can put the tanks

and the artillery of the current MEU on MPS shipping, perhaps we can put those systems and others on an LMSR earmarked for the MEU.²⁷ With a speed of advance (SOA) of 24 knots, the Bob Hope class ships can pace the MEU when necessary, and, if a means of cross-decking between the LMSR and the amphibious ships were readily available, the composition of the landing force could be adjusted at sea, well outside the threat from terrorist or insurgent groups.²⁸

A MEU optimized for distributed offensive sorties against terrorist targets would have increased helicopter lift and armed escort, enhanced ground mobility ashore, layered depth in intelligence and C2, while reserving the operational flexibility to add more layers of conventional fires when required.

^{27.} The LMSR is the large, medium-speed, roll-on/roll-off cargo ship, of which there are seven in service.

^{28.} Among the options for cross-decking at sea is the Navy's Mobile Landing Platform (MLP) in development now. The MLP is being developed as part of MFP(F) and will use the LCAC as a bridge between the LMSR and the amphibious platform.

Conclusions and recommendations

In this study, we have tried to determine the applicability of the MEU to the changed security environment of the new century. From the research we have done, our conclusion concerns the character of that environment. Everything we have read — all of the studies, surveys, research papers, conference results, and books — have repeated a single theme: we are in the midst of significant and singular strategic change [64]. The security threat to the United States has shifted from one of conventional military competition, to a protracted menace from a widely dispersed, globally netted and loosely affiliated collection of insurgent-like groups employing asymmetric means — in particular, terrorism — to destabilize the global economy and weaken the United States. These groups have resources and support structures in an increasing number of countries around the world. Their tactics, techniques, and weapons are becoming increasingly lethal. According to the National Intelligence Council:

"The key factors that spawned international terrorism show no signs of abating over the next 15 years. Experts assess that the majority of international terrorist groups will continue to identify with radical Islam. The revival of Muslim identity will create a framework for the spread of radical Islamic ideology both inside and outside the Middle East, including Western Europe, Southeast Asia and Central Asia.

This revival has been accompanied by a deepening solidarity among Muslims caught up in national or regional separatist struggles, such as Palestine, Chechnya, Iraq, Kashmir, Mindanao, or southern Thailand and has emerged in response to government repression, corruption, and ineffectiveness." [42]

The global Islamic insurgency will have to be confronted by highly mobile, distributed forces reliant on timely intelligence and proficient at low-intensity irregular warfare. Those same forces will also be required to provide a degree of foreign internal defense training and enhancement to partner nations in order to improve their own selfdefense and internal security capabilities. Confronting the global Islamic insurgency is not something the United States can do by itself.

From our analysis of the MEU's current organization, equipment, and capabilities mix, we determined that, for the most part, the MEU is well suited to the needs of the Combatant Commander in the low-intensity, counterinsurgency environment of the future. This is particularly true when the MEU is provided with a special operations capability (SOC) by either the current Maritime Special Purpose Force (MSPF) or the future Marine Special Operations company (MSOC) out of the newly created Marine Corps Forces Special Operations Command (MARSOC). The MEU is also an excellent crisis response tool at the low end of the spectrum of conventional combat operations. It is well suited as a "place holder" for the introduction of follow-on forces as a contingency builds.

Nevertheless, our analysis revealed some areas that the Marine Corps might examine as candidates for improvement if the MEU is to play a central role in the long war against the widely dispersed global insurgency of militant Islam. Primary among those potential weaknesses is the MEU's ability to operate offensively in a dispersed or distributed condition, remaining netted and sustainable in distant environments. This is a possible weak point in spite of the fact that today's ARG frequently operates in a dispersed ship condition.

We examined the weak point cited above, and determined that the limiting factor in achieving more distributed, simultaneous striking capability is the number of ships in the ARG, not the organizational construct of the MEU. There are some changes to the MEU itself that we recommend the Marine Corps consider in order to facilitate dispersed offensive operations; however, a principal recommendation of this study is that the force generation model of the ARG be examined for the possibility of increasing the number of ships in the ready group as well as the length of the standard deployment.

A second possible weakness was determined to be the MEU's ability to sustain irregular warfare over extended periods of time against the global Islamic insurgency. Part of this mismatch in capabilities is related to the regional persistence of the ARG/MEU — the deployment pattern does not give the force much time in a theater on a given deployment. Extending the deployed time can help improve this capability; however, there are also measures the Marine Corps can take to de-emphasize conventional combat capability in favor of low-intensity and counterinsurgency capability.

A repeated theme in the background research for deriving the requirement was today's need for U.S. military forces to accept risk in conventional capability in order to accentuate preparedness for the low-intensity, distributed, counterinsurgency operations of the future. This means a future emphasis on forces with less sophisticated war-fighting capability but with more intelligence gathering and interpretation capability, to include signals and human intelligence. It also points to the ability to operate in distributed packages against a dispersed and illusive enemy. This means more helicopter lift, clandestine entry from the sea, small raids, and an enhanced capacity for offensive direct action operations. These are strengths the MEU already possesses. The principal finding of this study is that the Marine Corps now has an opportunity to further shift its MEU "up and to the left" in the emerging challenges quad chart shown in figure 4. Such a move would mirror the strategic shift underway in U.S. naval capabilities and organization for employment.

A shift in favor of irregular warfare would be consistent with forward-deployed expeditionary forces being employed first in conventional situations as lighter, more rapid responders to crisis or as stabilizers in situations of escalating tension. Heavy forces and forces for protracted engagement are normally deployed from farther back in a theater, or from the United States itself. Given the importance of shaping and security cooperation to the COCOM now and in the future, it also makes sense to accentuate humanitarian relief supplies, engineering, and disaster response capabilities.

Our analysis of today's MEU in tomorrow's security setting also confirms that the need for heavy forces forward is less now in terms of deterring or responding to aggressive inter-state behavior. At the same time, the need for low-intensity flexibility in distributed offensive operations is increasing. In this regard there are a number of sophisticated weapons systems and some other logistics-intensive equipment that the Marine Corps might consider removing from the MEU as it optimizes for irregular warfare. Primary among these are: the M1A1 main battle tank, the M-198 howitzer, and the fixed-wing attack aviation complement.

The final conclusion in this study is that ship technology and the innovative progress made in pre-positioning and seabasing have brought U.S. naval strategy to the point where we no longer have to think of the composition of the MEU as unchangeable once the amphibious ready group sails. The technology exists now to position heavier and more conventional capabilities on MPS shipping, earmarked and specifically loaded for easy use by the forward-deployed and lighter MEU. As innovation increases in the at-sea cross-decking of major end items between logistics transport and amphibious ships, the flexibility of the MEU to operate from the sea along a considerable range of operational intensity will increase.

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